

JOHNSTON, CAROL A., Ph.D. Examining the Direct and Indirect Effects of Multiple Family Transitions. (2017)
Directed by Dr. Mark A. Fine. 109 pp.

In American culture the values of family and individualism are both highly respected, and yet fundamentally at odds with one another (Cherlin, 2009). The contrasting values can be seen in many facets of Americans' daily lives, particularly in the ways Americans form and restructure families. Multiple family transitions, defined as more than one change to the family structure including, but not limited to, new cohabiting partners, marriage, divorce, terminations of nonmarital cohabiting relationships, and remarriage (Elder, 1991; Ruschena, Prior, Sanson, & Smart, 2005), have become a normative part of the American family, and yet the family literature is relatively sparse on the effects of multiple family transitions, with notable exceptions (e.g., Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009; Fomby & Cherlin, 2007; Osborne, Berger, & Magnuson, 2012). The focus of this study is to examine the direct and indirect effects of multiple family transitions on maternal mental health and subsequently, children's behavioral and academic outcomes.

Data from the first five waves of the Fragile Families and Child Well-being Study (FFCW) was used to test multiple path models between multiple family transitions and maternal well-being and children's outcomes. The FFCW data collection began in 1998 with a cohort of 4898 children born in large U.S. cities who were more likely to be in families at risk of experiencing transitions and experiencing poverty (FFCW). Results indicated that multiple family transitions both directly and indirectly influence children's externalizing behaviors through maternal depressive symptoms, but not maternal

parenting stress. Children's internalizing behaviors were indirectly, but not directly, influenced by multiple family transitions through maternal depressive symptoms but not through maternal parenting stress. Children's verbal skills were negatively associated with multiple family transitions. Results underscore the significance of understanding the processes families experience as they navigate multiple family transitions and highlight the potential importance of mental health supports for parents and children during and after multiple family transitions.

EXAMINING THE DIRECT AND INDIRECT EFFECTS OF
MULTIPLE FAMILY TRANSITIONS

by

Carol A. Johnston

A Dissertation Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
2017

Approved by

Committee Chair

To Alta Bowers Cates, my grandmother,
for her uncompromising love, support, and faith.

APPROVAL PAGE

This dissertation, written by Carol A. Johnston, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____

Committee Members _____

Date of Acceptance by Committee

Date of Final Oral Examination

ACKNOWLEDGMENTS

I would like to express my deep gratitude to my committee chair, Mark Fine, for his unwavering support and belief in my ability as a scholar. Thank you to my committee members, Danielle Crosby, Daniel Perlman, and John Willse, for their many hours of advice and for continually pushing me to greater scholarship through their mentoring. I would also like to thank my community, friends, and family, those who have gone before and those standing with me today. Thank you for stepping in to keep things running, for not allowing me to give up, and for seeing me through to the end. Thank you to my brother, whose support both held me up and pushed me forward. I stand on the shoulders of giants.

Finally, thank you to the Fragile Families and Child Well Being Study for the use of their data and to the participants for sharing their lives and experiences to further our understanding of families.

Thank you, God, for meeting me in the hard and joyful places alike.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vii
LIST OF FIGURES	viii
 CHAPTER	
I. INTRODUCTION	1
Family Transitions	2
Multiple Family Transitions	4
Theoretical Foundations.....	6
Life Course Perspective	6
Social Stress Theory	13
II. LITERATURE REVIEW AND PROPOSED STUDY	16
Direct Effects of Multiple Family Transitions and Family Structure Transitions.....	16
Indirect Effects of Multiple Family Transitions and Family Structure Transitions	19
Maternal Depression	21
Maternal Parenting Stress	22
Moderating Effects.....	26
Child Gender	27
Maternal Race/Ethnicity	29
Contribution of the Proposed Study.....	31
III. METHODS	34
Participants.....	34
Missing Data	34
Measures	35
Multiple Family Transitions	35
Children’s Externalizing Behaviors.....	37
Children’s Internalizing Behaviors	38
Children’s Verbal Ability	38
Maternal Depressive Symptoms	38
Maternal Parenting Stress	39

Focal Child Demographics	40
Control Variables	40
Plan of Analysis	41
Direct and Indirect Path Models	42
Direct and Indirect Effects of the Number of Multiple Family Transitions	42
Direct and Indirect Effects of Family Structure Transitions.....	44
Moderation Models of the Number of Multiple Family Transitions	45
Moderating Effects.....	45
IV. RESULTS	47
Preliminary Analyses	47
Descriptive Statistics and Correlations	47
Controls.....	47
Focal Analyses	48
Direct Effects and Indirect Effects	48
Direct and Indirect Effects of Multiple Family Transitions and Family Structure Transitions.....	48
V. DISCUSSION	61
Multiple Family Transitions	62
Externalizing Behaviors.....	64
Internalizing Behaviors.....	65
Verbal Ability	66
Moderating Effects.....	67
Multiple Family Structure Transitions.....	69
Always Social Father Families	69
Always Single Mother Families.....	70
Transition into Two-Parent Biological Families.....	71
Transition into Social Father Families.....	72
Transition into Single Mother Families	72
Strengths and Limitations	73
Future Directions	75
REFERENCES	78
APPENDIX A. TABLES	95
APPENDIX B. FIGURES.....	102

LIST OF TABLES

	Page
Table 1. Correlations, Means, and Standard Deviations.....	95
Table 2. Direct and Indirect Effects of Multiple Family Transitions	96
Table 3. Family Structure Transitions Results.....	98
Table 4. Total Effects.....	100
Table 5. Covariance Coverage.....	101

LIST OF FIGURES

	Page
Figure 1. Multiple Family Transitions Conceptual Model	102
Figure 2. Multiple Family Transitions Path Model	103
Figure 3a. Family Structure Transitions and Child Externalizing Behavior	104
Figure 3b. Family Structure Transitions and Child Internalizing Behavior	105
Figure 3c. Family Structure Transitions and Child Verbal Ability	106
Figure 4a. Family Structure Transitions and Child Externalizing Behavior Results	107
Figure 4b. Family Structure Transitions and Child Internalizing Behavior Results	108
Figure 4c. Family Structure Transitions and Child Verbal Ability Results	109

CHAPTER I

INTRODUCTION

American culture is unique in that both the value of family and the value of individualism are highly respected, and yet inherently in conflict (Cherlin, 2009). The two values are at odds with each other, one emphasizing the group (or family) and one emphasizing the needs of individuals who comprise the family. There are various ways the societal value of both familial ties and individualism are felt by individuals in the United States. Intimate relationships are the most common vehicle used to form a family and phrases such as “blood is thicker than water” are commonplace. At the same time, individualism is highly favored as is evidenced by common phrases such as “pull yourself up by your bootstraps” and Americans’ consistent desire and inclination to move freely for a better job or opportunity (Cherlin, 2009).

The value of family encourages Americans to form intimate relationships. The value of individualism encourages Americans to be ever watchful for the next great opportunity, the “American Dream,” or as Cherlin (2009) stated, the “M-factor” (movement, migration, and mobility; p. 146). He argues that it is possible that Americans’ feelings of restlessness and heightened desire for newness and mobility may be associated with Americans trend to dissolve relationships more frequently than people in other countries. The lure of a better opportunity or a more satisfying relationship fuels a willingness to leave current jobs or relationships for the promise of a better life, and yet

the pull of family draws individuals back into intimate relationships and promotes stability.

This juxtaposition of values can be seen clearly in the way Americans both couple (and recouple) and divorce (or break ties) more than couples in other countries (Cherlin, 2009). From 1970 through 2013, the crude marriage rate in the United States (per 1000 total population) kept the United States in the top 5 out of 41 countries (CDC, 2016; Eurostat, 2016). In the same time period, the crude divorce rate in the United States (per 1000 total population) did not fall below fourth out of the same 41 countries for the highest divorce rate (CDC, 2016; Eurostat, 2016). As such, family transitions have become a normative part of society and left few, if any, individuals untouched (Cherlin, 2009).

Family Transitions

Family transitions are defined as changes to family structure that consist of, but are not limited to, new cohabitating partners, marriage, divorce, terminations of nonmarital cohabiting relationships, and remarriage (Elder, 1991; Ruschena et al., 2005). Current family structures are the result of past (or ongoing) transitions. As a result of Americans' sustained propensity to form and reform intimate relationships, families experience a range of family transitions over their life course (Deater-Deckard & Dunn, 1999). Families are ever evolving units that consist of any number of individuals. As family structure changes accumulate, individuals within the family are affected in a variety of ways, both short- and long-term.

Perhaps one of the most profound and far reaching effects of family transitions is felt by children who experience their parents' multiple family transitions (marriages, divorces, cohabitations, terminations of cohabiting relationships, and remarriages). It is estimated that 30–50% of children in the United States will experience at least one major family transition before they are 18 (Richardson, Stallard, & Velleman, 2010). Family transitions are not a series of single events that can be viewed as static events that individuals move past quickly, but are rather ongoing processes that progress over time and impact family members in different ways across the lifespan

Current research suggests that experiencing at least one family transition places children at a greater risk for negative outcomes such as externalizing behaviors (Lansford et al., 2006; Weaver & Schofield, 2015), internalizing behaviors (Fröjd, Kaltiala-Heino, Pelkonen, von der Pahlen, & Marttunen, 2009; Weaver & Schofield, 2015), and academic outcomes such as poor performance in the classroom and academic adjustment difficulties (Anthony, DiPerna, & Amato, 2014; Kurdek, Fine, & Sinclair, 1995; Magnuson & Berger, 2009; Sun & Li, 2009). Family studies scholars have long studied how children of divorce experience the transition from a two-parent household into two one-parent households (Amato, 2010). The natural progression of the divorce literature was then to study children's well-being as they transition into a stepfamily and the changes, both positive and negative, that come from blending two families together. There was evidence that when fathers remarry the mother-child relationship is affected, but the opposite does not hold in that mothers' remarriage was not associated with either the father-child relationship or the mother-child relationship (Frank, 2007). While there

has been a wealth of information examining how one family transition (such as a divorce or the dissolution of a cohabiting relationship) affects children, there has been far less research addressing the cumulative effects of multiple family transitions. The focus of this dissertation is on how early multiple family transitions affect children's outcomes in middle childhood.

Multiple Family Transitions

Multiple family transitions are defined as more than one change to the family structure, or more than one family transition, and are measured by the number of changes to a parent's relationship status that resulted in an adult entering or exiting the home (Fomby & Bosick, 2013). For the purposes of this study, the definition does not include the addition of children or the creation or dissolution of multi-family or multi-generational households. Multiple family transitions have also been referred to as family instability (Fomby & Bosick, 2013; Osborne et al., 2012), usually in conjunction with the family instability hypothesis, which states that children who experience multiple disruptions in their family structure will report low child well-being (Fomby & Cherlin, 2007). However, the term family instability and the family instability hypothesis imply a negative connotation, but there are many resilient children who experience multiple transitions or who return to baseline levels of behavior after a period of transition. It is important to not perpetuate a bias that family transitions are inherently and always negative. Therefore, for the purposes of this study, the term *multiple family transitions* will be used to indicate more than one change to the family structure.

In 2014 alone, 13.03% of Americans had been married twice (a minimum of three family transitions) and 3.51% reported three or more marriages (a minimum of five transitions; 2010-2014 American Community Survey). While there is less research on how multiple family transitions affects children's well-being, there is enough empirical evidence to support the need for further inquiry. Specifically, a handful of studies have shown that academic outcomes are associated with multiple family transitions such that students who experience multiple family transitions are more likely to report poorer academic functioning (Martinez & Forgatch, 2002), lower grade point averages (Kurdek et al., 1995), lower verbal abilities (Cooper, Osborne, Beck, & McLanahan, 2011), and lower rates of college completion (Fomby & Bosick, 2013) than students who do not experience multiple family transitions. Additionally, multiple family transitions are associated with higher reports of children's problematic behavior (Kurdek et al., 1995; Cooper et al., 2011; Waldfogel, Craigie, & Brooks-Gunn, 2010). Specifically, more multiple family transitions were associated with children's aggressive and anxious/depressed symptoms at age 3 (Osborne & McLanahan, 2007) and with children's internalizing and externalizing behaviors at age 9 (Fomby & Osborne, 2017). There is a need in the larger family literature for more studies to replicate findings that examine the effects of multiple family transitions for parents and children.

While there is a dearth of knowledge on multiple family transitions, there is a plethora of research on children of divorce, children in single parent homes, and children in stepfamilies. Studies of the effects of one family transition have yielded useful information, but we do not yet have a clear understanding of how multiple family

transitions might overlap with one another, how many family transitions have occurred prior to the one being studied, or the processes that occur before, during, and after a family transition. Overall, there is less research on the cumulative effects of multiple transitions for families and children. More research is needed to confirm and expand our knowledge base so that family policy and practice can accurately target mechanisms for intervention.

Theoretical Foundations

Life Course Perspective

The life course perspective offers a sociologically based lens that views the family as a microsystem that is part of, and effected by, a larger societal system (Bengtson & Allen, 2009). The life course perspective provides a useful framework for examining the effects of multiple family transitions on individuals within the family without losing focus on the multiple contexts that surround the process of family transitions. As such, the life course perspective is often used as a foundation to study families over time. In a review of family research articles in the *Journal of Marriage and Family* from 1990 to 1999, the life course perspective or theory was the second most cited theory (Taylor & Bagdi, 2005), and was still being used prolifically during the last decade-in-review to study families (Amato, 2010).

Families experience change from month to month and year to year; transitions are inherent in the life cycle of a family and occur throughout an individual's life span (Elder, 1998). Elder (1998) posits that life's transitions, particularly early transitions, evolve to create an individual's trajectory through "cumulating advantages and

disadvantages” (p. 7). Although there are many types of transitions that can occur within families, the focus here is on parental relationship changes that alter the family structure (e.g., separations, cohabitations, marriages).

In the following sections I will discuss the life course perspective and how this perspective can be used as a foundational theory for the study of multiple family transitions. Linked lives proposes that we do not live in a vacuum, but rather we live in relationship with those around us, most notably, our families, and that those relationships affect our daily lives and long-term outcomes and trajectories (Elder, 1994). The life course perspective provides a framework for studying the process of multiple family transitions longitudinally. Family transitions do not occur overnight and should not be treated conceptually or analytically as if they do. The life course perspective acknowledges individuals in the context of their family life and the individual transitions that occur throughout the life span (Dilworth-Anderson, Burton, & Klein, 2005). The socio-cultural and historical context of time and place contributes to the overall picture by providing a vantage point from macro-level societal influences, such as national and cultural values. Finally, the agency of the individual, the acknowledgement of individuals’ ability to make decisions about their lives within the context of their cultural and historical position, can influence or change an individual’s trajectory as a result of a family transition (Elder, 1998; Walker, Allen, & Connidis, 2005). Using the life course perspective as a foundation for studying multiple family transitions will utilize the combined power of linked lives, transitions over time, the socio-cultural and historical context of the family and the individual, and the agency of individuals within the family.

Linked lives. The concept of linked lives is a central component of the life course perspective. It is the belief that as humans we are in relationship with others and the decisions of one person affects the lives and trajectories of those around him/her now and in the future. Research shows that divorce in one generation has an effect on subsequent generations such that divorce in the first generation is associated with less education and weaker relationships with parents in the third generation (Amato & Cheadle, 2005). As a social species, our lives are linked to family members (past, present, and future), social network members, and others whom we encounter in daily lives (Elder & Caspi, 1988). Children's lives are linked to and affected by their parents' actions, including partnership patterns such that changes in parental partnerships are associated with children's verbal ability and boys' behaviors (Cooper et al., 2011). For example, a parental change in relationship status affects other members of the family in profound ways, potentially altering both the parents' and children's trajectories. Linked lives includes those outside of the immediate home, but the focus of this study is on the linkages between mother and child.

Trajectories. In addition to linked lives, the life course perspective proposes the use of longitudinal designs to conceptualize and analyze the influence of societal forces on individual trajectories (Elder, 1994). Societal forces can be felt by individuals at the macro level or at the micro level. A longitudinal design is used to capture a holistic view of how families that experience multiple transitions fare over the short- and long-term. Much of the previous research on family transitions viewed divorce and remarriage as one-time events that could be understood using cross-sectional designs, as compared to

longitudinal designs that provide a broader understanding of how multiple family transitions affect children over time (Malone et al., 2004). It is also possible that one transition begins before another ends, a phenomenon that cross-sectional designs would not capture. Longitudinal research designs are adept at studying multiple transitions that occur over time by following families through multiple transitions. This study will examine the number and type of family structure changes that represent proximal forces that influence individual trajectories.

Timing of transitions. The timing of transitions in both the macrosystems of societal time and place and also the microsystems of individual life trajectories are integral to the life course perspective (Bengtson & Allen, 2009). Furthermore, early transitions are “embedded in trajectories that give them distinctive form and meaning” (Elder, 1994, p. 5). In other words, transitions are often the catalysts that shape and alter trajectories. While many scholars focus solely on how changes in the larger macro society affect lives, others focus on how changes in the more proximal familial context affect the developing lives of individuals within the family. The timing of transitions is conceptually important to the study of multiple family transitions because outcomes may be differentially affected in specific ways at different ages or stages of an individual’s life. Transitions that occur early in life are particularly important as they often shape the direction of children’s trajectories (Elder, 1998). For example, transitions can affect children’s school readiness, which in turn can affect their academic trajectory for years to come and can be hard to overcome (Quirk, Grimm, Furlong, Nylund-Gibson, & Swami, 2015). The transition of a divorce at 5 years of age is associated with children’s

internalizing and externalizing trajectories, but a divorce transition that occurs at 15 years of age is associated with a drop in grades at school (Lansford et al., 2006) and multiple family transitions before age 5 were associated with social behaviors in middle childhood (Cavanagh & Huston, 2008). Each early family transition has the potential to alter the trajectory of individuals within their family units over time.

Historical time and place. Historical time and place refers to macro-level societal values influencing the climate surrounding familial changes (Elder, 1994). For example, social sanctions for divorce were much stronger historically whereas divorce has more recently become an acceptable response for couples that have grown apart, or who are perhaps in search of greater mobility, the “M-factor” (Cherlin, 2009). Societal beliefs and values, which are often observed in hindsight rather than in the moment, have the power to alter individual trajectories (Elder, 1994; Steele, 2010). Although it is outside the scope of the current investigation, the incorporation of a theoretical macro perspective allows for future examination of cohort effects of children who have experienced multiple family transitions across different socio-historical time frames. For example, changing societal beliefs about marriage and divorce may influence how others perceive children of divorce from different cohorts and how they view themselves (Cherlin, 2009). It is expected that a cohort of children who experienced divorce in the early 1900’s would have a different experience than that of children who experienced a parental divorce in the early 2000s. Prior to the no fault divorce law that began in California in 1970, divorce was hard to obtain and viewed more negatively than it is today. A no-fault divorce is now easier to obtain in most states and divorce is no longer

viewed as negatively as it once was; therefore, the impact of a divorce transition should diminish in effect. The same can be said for remarriages and cohabitation. As each family structure becomes normalized, the stigma decreases, and perhaps the negative outcomes for children who experience multiple family transitions become weaker.

Individual agency. Acknowledging individual agency connects individuals to the larger social context and at the same time provides space for individual differences. Human agency recognizes that individuals make decisions in response to transitions that shape their trajectories (Elder, 1994). Each family member has personal characteristics that influence how multiple family transitions will affect their trajectory. Previous research suggests that not all children react in the same way to multiple family transitions and some children are resilient in the face of an ever-changing family structure, while other children are profoundly affected behaviorally, academically, and emotionally (Lansford, 2009).

Views regarding the extent of divorce's negative influence on children and society have ranged from one extreme to the other. One side of the debate strongly suggested that divorce and any subsequent transitions were harmful to children with long-term consequences that included an inability to maintain close relationships with intimate partners and with their parents (Wallerstein, 2000; Wallerstein & Kelly, 1980). The other side of the debate argued that for some families, children fared better after a divorce and that those children who were affected negatively were small in number (Hetherington & Kelly, 2002). Hetherington and Kelly's seminal article was one of the first to specifically challenge the then-prevailing belief that divorce did irreparable harm to children.

Most researchers acknowledge that family transitions affect individual family members to an extent but likely not as much as, or for as long as, was once thought. Moving from a comparative research design (e.g., children who have versus those who have not experienced divorce) to a within-group design including multiple groups of children who have experienced divorce allows for the assessment of naturally-occurring variation and can help disentangle who experiences negative outcomes and who experiences resiliency. The life course perspective is advantageous in that it does not assume that every individual has the same trajectory or response to multiple family transitions, but allows for individual characteristics and contextual characteristics that may indirectly affect the association between multiple family transitions and individual outcomes.

By utilizing a long-term approach, the life course perspective provides a foundation for a holistic, longitudinal examination of how multiple family transitions affect individual life courses. The life course perspective crosses multiple levels of inquiry from the broader societal level of historical time and space to the individual level of human agency. It acknowledges that family members' lives are linked to one another and choices that one person makes affects the trajectories of those in the family unit, now and in the future. Throughout this study, the life course perspective will be used as a foundation. Specifically, multiple family transitions was measured before age 5 to account for early transitions and the effect on children's trajectories and linked lives will be heavily used to hypothesize about the relationship between parental relationship

transitions, subsequent maternal well-being, and children's behavioral and academic outcomes.

Social Stress Theory

Social stress theory provides an additional theory to view changes and unique stressors that are associated with structural family changes (George, 1993) and multiple family transitions (Cooper et al., 2011; Osborne & McLanahan, 2007; Osborne et al., 2012). This theory emphasizes the role of cumulative stress (George, 1989), or in this study, cumulative family transitions. Social stress theory draws from early iterations of role theory and life course sociological perspectives and studies that used Holmes and Rahe's (1967) Social Readjustment Rating Scale that address cumulative effects of multiple stressors (George, 1993). Early perspectives on role theory focused on the discrepancy between the social structure of the role and the normed, or expected behavior, of the person occupying the role. Role theory was criticized for its lack of attention to individual heterogeneity and social context, which social stress theory addresses. The introduction of social context led to the study of how social location led to illness with stress as the indirect link between the two. It was in these studies that stress was operationalized as the mediator between social location and physical and mental health (George, 1993).

Social stress theory proposes that stress is not inherently a result of negative events, but that positive events can elicit a great deal of stress as well. The recognition of heterogeneity among events is important. To study children who have experienced family transitions, one must realize that these children have a range of transition

experiences; some have experienced two divorces, a remarriage, and a cohabitation, while others have only experienced the one divorce and it was friendly. Transitions, changes to a routine, can be stressful even if the overall change is a good one. It is this aspect of social stress theory, coupled with the inclusion of additive stress, which makes it attractive for the study of multiple family transitions, some of which are positive and some of which are negative.

The Social Readjustment Rating Scale assigns a stress value to common life events, both positive and negative. Changes, even good ones, require adaptations and some individuals are better than others at making adaptations (Holmes & Rahe, 1967). Over time, some changes become routine and the stress of the transition dissolves and no longer has a major effect. Family researchers have posited that separation and cohabitation or remarriage both require adjustments during and immediately following the transition but there is not a clear consensus on how long the effects of any transition last.

Osborne et al. (2012) further extended the use of social stress theory as a foundation to suggest that the type of transition that occurs is important in determining if there are long term effects as a result of life events such as multiple family transitions. Specifically, multiple parental partnership changes create disruptions in family income and social support that lead to adjustments for both parents and children (Osborne & McLanahan, 2007). The authors suggest that while the additive nature of family transitions should be taken into account, the type of family transitions should also be included.

The transition of a person entering the home is qualitatively different from someone exiting the home, and the outcomes may be different as well. While a new union typically brings in new economic and human capital, it also changes the structure of the household and alters the roles of household members. As members of the newly reformed household shift their role and role expectations are unclear, stress levels may be higher for a short period of time, even with the additional economic and human capital. Therefore, both the number of transitions and the type of transitions are important to consider when examining multiple family transitions.

Social stress theory argues that the type of transition that occurs is important in determining if there are long-term effects as a result of life events such as multiple family transitions. Specifically, multiple parental partnership changes lead to disruptions in family income and social support that lead to adjustments for both parents (Osborne & McLanahan, 2007), and subsequently, children. The life course perspective, coupled with social stress theory, is able to theoretically account for the additive effects of multiple family transitions by holistically examining how multiple family transitions influence maternal well-being, children's outcomes, and how mother's and children's outcomes are inextricably linked (Osborne et al., 2012; Elder 1994; 1998).

CHAPTER II

LITERATURE REVIEW AND PROPOSED STUDY

Following the tenets from the life course perspective and social stress theory, I propose the following conceptual models (Figure 1 and Figure 2; for figures, see Appendix B). Borrowing from the theoretical concepts of the life course perspective and social stress theory, I propose that multiple family transitions, both the number of transitions (Figure 1) and the type of transitions (Figure 2), will have an impact on maternal well-being and children's behavioral and academic outcomes. Furthermore, linked lives emphasizes that multiple family transitions may also indirectly affect children through the more proximal effects of maternal well-being. In the following sections, I will review pertinent empirical literature that supports my specific hypotheses.

Direct Effects of Multiple Family Transitions and Family Structure Transitions

The life course perspective tenet of linked lives proposes that the changing relationship status of a parent has an impact, positive or negative, on other members of the family, including children. The number of people in the household changes when someone physically enters or exits the home and with them the rules, boundaries, and routines previously agreed upon are disrupted. Such changes are neither inherently good nor bad, but they are transitions, and social stress theory suggests that transitions exert at minimum short-term negative effects on individuals (Holmes & Rahe, 1967; Osborne et al., 2012; Osborne & McLanahan, 2007). Although researchers generally agree that

children are affected by changing family structures, there is less agreement on the magnitude and duration of these effects and the processes that may mediate the associations (Cherlin, 2009).

Early studies provided foundational research to build upon by establishing an association between multiple family transitions and children's behavioral and academic outcomes. Multiple family transitions have been linked with academic outcomes such that children who experienced multiple family transitions were less likely to pursue postsecondary education (Aquilino, 1996), had a harder time adjusting to school (Kurdek et al., 1995), and reported lower college graduation rates (Fomby & Bosick, 2013) than peers who did not experience multiple family transitions. Boys' externalizing behaviors (girls' externalizing behaviors were not assessed in many early studies) have also been associated with multiple family transitions such that a higher number of family transitions were associated with more externalizing behaviors (Capaldi & Patterson, 1991; Cooper et al., 2011; Martinez & Forgatch, 2002). However, in a recent study, similar patterns of association between multiple family transitions and children's externalizing and internalizing behaviors were found in samples of both boys and girls; more family transitions led to more problematic behaviors (Osborne & McLanahan, 2007).

Previous literature examining the association between multiple family transitions and children's outcomes compared families who experienced a family transition such as divorce or remarriage to two-parent, biological households. However, a child born into a single parent home whose parent does not cohabit or marry also does not experience a transition. The approach in the proposed study that includes a focus on the number of

transitions, *and* the types of family transitions, is unique, with a few notable exceptions (e.g., Osborne et al., 2012; Lee & McLanahan, 2015). Additionally, the majority of literature related to family structure focuses on one transition and/or one type of family structure. The study of multiple family transitions and family structure helps to fill a gap in an otherwise well-researched field. Establishing an association between multiple family transitions and children's academic and behavioral outcomes is the first step in adding to a small body of research.

What are the direct effects of multiple family transitions on children's outcomes?

Hypothesis 1.1: Children who experience higher numbers of family transitions between ages 1 and 5 will score higher on symptoms of children's externalizing behaviors at age 9 (Figure 1, a1).

Hypothesis 2.1: Children who experience higher numbers of family transitions between ages 1 and 5 will score higher on symptoms of children's internalizing behaviors at age 9 (Figure 1, b1).

Hypothesis 3.1: Children who experience higher numbers of family transitions between ages 1 and 5 will report lower verbal ability at age 9 (Figure 1, c1).

What are the direct effects of family structure transitions on children's outcomes?

Hypothesis 1.3: Children who have always been in a two-parent biological family will have fewer externalizing behaviors at age 9 (Figure 3a, a1-a5) than will children in any of the following family structural transitions groups (a) transition into a two-parent biological family, (b) transition into a social father family, (c)

transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Hypothesis 2.3: Children who have always been in a two-parent biological family will have fewer internalizing behaviors at age 9 (Figure 3b, a1-a5) than will children in any of the following family structural transitions (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Hypothesis 3.3: Children who have always been in a two-parent biological family will have higher levels of verbal ability at age 9 (Figure 3b, a1-a5) than will children in any of the following family structural transitions a) transition into a two-parent biological family, b) transition into a social father family, c) transition into a single mother family, d) always been in a social father family, and e) always been in a single mother family.

Indirect Effects of Multiple Family Transitions and Family Structure Transitions

The influence of multiple family transitions on child outcomes, however, does not occur in a vacuum. There are additional processes that may indirectly affect the association that need to be examined and taken into consideration. Multiple family transitions, positive or negative, are viewed as cumulative stressors that potentially lead to prolonged negative effects (Osborne & McLanahan, 2007). In recent studies, mothers who experience multiple structural transitions reported increases in depression and

parenting stress (Osborne et al., 2012), which have been linked with negative child outcomes (Bachman, Coley, & Carrano, 2012; Osborne & McLanahan, 2007).

Previous literature has linked maternal depression to greater emotional problems for children such that maternal depressive symptoms have been directly and indirectly associated with children's internalizing behaviors (Cummings, Keller, & Davies, 2005). Studies have shown a link between depressive symptoms in mothers and children's emotional problems through greater negative emotional and less positive emotion (Klein, Durbin, & Shankman, 2009). A recent meta-analysis confirmed that not only is maternal depression significantly associated with children's internalizing behaviors, but also with children's externalizing behaviors (Goodman et al., 2011).

Previous research suggests that family transitions can directly and indirectly affect children's behavioral and academic outcomes through more proximal mechanisms such as household income (Bachman et al., 2012), neighborhood resources (Amato, 2005), and parental well-being (Bachman et al., 2012; Osborne & McLanahan, 2007). This study will focus on maternal mental health, measured by maternal depressive symptoms and maternal parenting stress. As described in further detail below, constructs such as maternal depressive symptoms and maternal parenting stress may indirectly effect the relationship between family transitions and children's outcomes. There is a plethora of studies that have examined potential indirect effects between a single-family transition and children's outcomes, but fewer that take into account additional family transitions. Although there is still much to learn about potential indirect effects of multiple family transitions, what we do know can inform future research questions and studies.

Research has shown that changes in maternal stress (Lansford, 2009; Weaver & Schofield, 2015) have the potential to indirectly effect the relationship between family transitions and child outcomes. The current study will contribute to the growing body of literature on multiple family transitions and child outcomes by assessing direct and indirect links related to maternal well-being.

Maternal Depression

Social stress theory proposes that cumulative stressors, such as multiple partner changes, leads to depression (Ertel, Rich-Edwards, & Koenen, 2011). Maternal depression is linked to children's outcomes through the life course proposition of linked lives. When mothers are depressed, children are affected because their lives are inextricably linked. Stress theory suggests that as multiple family transitions occur, the stress on family members increases, exacerbating the effect of the transition and increasing depression. Singular family transitions, specifically divorce, have been related to parental depression, which leads to a higher risk of children's internalizing and externalizing behaviors (Weaver & Schofield, 2015). Although there are empirical studies that suggest a slight decrease in depression when a partner enters the home and a slight increase in depression when a partner exits the home (Osborne et al., 2012), the overall literature is not consistent. A study of women in a variety of family structures in the United Kingdom indicated that single women who had been divorced and married women in stepfamilies were more likely to suffer from depression than married women in biological families (O'Conner, Hawkins, Dunn, Thorpe, Golding, 1998), suggesting that

transitions may have been confounded in family structure. Less is known about the association between multiple family transitions and maternal depression.

The effects of maternal depression on children's psychosocial well-being (Forehand et al., 1991; Wright, George, Burke, Gelfand, & Teti, 2000; Goodman & Tully, 2006) and academic performance (Wright et al., 2000; Claessens, Engel, & Curran, 2015) have been well documented. Adolescents of depressed mothers were more likely than adolescents of non-depressed mothers to be engaged in aggressive behaviors (Forehand, Long, Brody, & Fauber, 1986; Pugh & Farrell, 2012) and were more likely to experience heightened emotional sensitivity (Murray, Halligan, Adams, Patterson, & Goodyear, 2006). In their meta-analysis, Connell and Goodman (2002) reported small, but significant, effects for the association between maternal depression and children's internalizing and externalizing behaviors.

Given the limited and, at times, conflicting results of current literature regarding multiple family transitions and maternal depression and the well-established links between maternal depression and child outcomes, it is important to examine the indirect effect of maternal depressive symptoms on the relationship between multiple family transitions and child outcomes. This study extends the small, but informative, body of literature that has linked multiple family transitions to maternal depressive symptoms and maternal parenting stress by including children's outcomes (Osborne et al., 2012).

Maternal Parenting Stress

Social stress theory posits that multiple family transitions might result in a decrease in maternal psychological well-being as a result of disruptions in routines and

norms and the additive stress of the multiple transitions (Holmes & Rahe, 1967).

Partnership transitions have a unique impact on the parent-child relationship, particularly as the members of the household change. Roles change and boundaries are renegotiated during both union and dissolution transitions, albeit in different ways. When one parent exits the home, the remaining parent may suddenly find him- or herself with more parental responsibilities while simultaneously working through his or her own loss and therefore may experience more parenting stress. When a partner enters the home, the parent-child dynamic shifts. Mothers who dissolved relationships with either their child's biological father or a social father were more likely to experience an increase in maternal stress than mothers who remained in stable cohabiting relationships (either biological father or social father; Cooper et al., 2009). Given conflicts that may arise surrounding parenting roles and ideology, the responsibilities of each partner, in terms of parenting, may be vague and therefore stressful for both mother and child as new group dynamics are negotiated.

Numerous parenting constructs have been examined as indirect effects of the association between family transitions and children's outcomes. For example, links between child behavior outcomes (e.g., aggressiveness and anxious/depressed) and multiple family transitions were indirectly effected by maternal stress such that more family transitions led to higher levels of maternal stress, which subsequently led to higher reported levels of aggression and depression among children (Osborn & McLanahan, 2007). Furthermore, mothers who transition into or out of relationships reported higher parenting stress than mothers in stable relationships; however, mothers who later

transitioned into a two-parent, biological family structure (i.e., who married their child's father) were found to report lower levels of stress than mothers who were in stable, but single-parent family structures (Cooper et al., 2009). These conflicting findings indicate that not only does the number of family transitions matter, but the *type* of transitions matters as well, and support the need for further investigation into the indirect effects of family transitions in order to have a more holistic understanding of how transitions affect family members.

More conclusive research on how multiple family transitions and child behavior and academic outcomes are indirectly effected by maternal stress is needed to provide concrete policy and intervention solutions. Many mothers and children experience multiple family transitions, and the more we understand about the additive effect of family transitions, the better able we will be to inform policies and interventions that aim at reducing mother's parenting stress and by doing so increase children's academic performance and decrease the potential for problematic behaviors.

What are the indirect effects of multiple family transitions on children's outcomes?

Hypothesis 1.2: Maternal depressive symptoms and maternal parenting stress will indirectly affect the relationship between multiple family transitions and child externalizing behavior such that more family transitions will predict higher levels of maternal depressive symptoms (m1) and maternal parenting stress (m2), which will predict high levels of children's externalizing behaviors (Figure 1, a2).

Hypothesis 2.2: Maternal depressive symptoms and maternal parenting stress will indirectly affect the relationship between multiple family transitions and child

internalizing behavior such that more family transitions will predict higher levels of maternal depressive symptoms (m1) and maternal parenting stress (m2), which will predict high levels of children's internalizing behaviors (Figure 1, b2).

Hypothesis 3.2: Maternal depressive symptoms and maternal parenting stress will indirectly affect the relationship between multiple family transitions and child verbal ability such that more family transitions will predict higher levels of maternal depressive symptoms (m1) and maternal parenting stress (m2), which will predict high levels of children's verbal ability (Figure 1, b2).

What are the indirect effects of family structure transitions on children's outcomes?

Hypothesis 1.4: Children who have always been in a two-parent biological family will have smaller indirect effects of maternal depressive symptoms (Figure 3a, b1-b5) and maternal parenting stress (Figure 3a, c1-c5) on the association between family structure and children's externalizing behaviors (Figure 3a, f1-f2) than will children in any of the following family structural transitions (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Hypothesis 2.4: Children who have always been in a two-parent biological family will have smaller indirect effects of maternal depressive symptoms (Figure 3b, b1-b5) and maternal parenting stress (Figure 3b, c1-c5) on the association between family structure and children's internalizing behaviors (Figure 3b, f1-f2) than will children in any of the following family structural transitions (a)

transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Hypothesis 3.4: Children who have always been in a two-parent biological family will have smaller indirect effects of maternal depressive symptoms (Figure 3c, b1-b5) and maternal parenting stress (Figure 3c, c1-c5) on the association between family structure and children's verbal ability (Figure 3c, f1-f2) than will children in any of the following family structural transitions (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Moderating Effects

Whereas there is empirical support for the association between multiple family transitions and child adjustment, there is also evidence that the association does not operate in the same way for all children. Several moderators have been empirically demonstrated to be important in family structure studies such as gender, parental conflict (pre- and post-transition), marital quality, ethnicity, social support, and stigmatization of the transition. Inclusion of all possible moderators is not reasonable; therefore, based on previous empirical work described below, child gender and maternal race will be included as moderators for the current study. Child gender and maternal race were chosen because previous literature is unclear regarding how multiple family transitions might operate differently by gender and race. Rather than control for gender and race,

path analysis allows for model comparison to more directly assess if the overall model is operating the same way for girls with Black mothers, boys with Black mothers, girls with Hispanic mothers, boys with Hispanic mothers, girls with White mothers, and boys with White mothers.

Child Gender

Gender was proposed as a moderator of the model in Figure 1 such that the direct effects of multiple family transitions and child outcomes and the indirect effects of multiple family transitions on child outcomes through maternal well-being and maternal parenting stress operate differently for boys and girls. Early studies of family structure suggested that boys were more negatively affected by divorce than girls, but girls were more affected by remarriage than boys (Hetherington, Cox, & Cox, 1985). However, later studies reported a stronger negative effect for girls' adjustment after a parental divorce (Allison & Furstenberg, 1989). Yet, another study suggests girls', but not boys', mathematics scores were negatively affected by divorce (Anthony et al., 2014). Some studies have also found that gender did not moderate the relationship between divorce and child adjustment (Amato & Cheadle, 2005; Sun & Li, 2009). The lack of consistent results suggests that more studies are necessary to further our knowledge of if and how gender moderates children's adjustment to multiple family transitions specifically for externalizing behaviors, internalizing behaviors, and verbal ability.

Of the few studies that have examined multiple family transitions and child gender, child gender has not always been examined as a potential moderator; it has often only been statistically controlled (Fomby & Cherlin, 2007; Magnuson & Berger, 2009).

In a within-group study of mothers and sons who had experienced at least one recent separation, researchers found that the more family transitions that boys experienced, the more likely parents and teachers were to report problematic externalizing behaviors (Martinez & Forgatch, 2002). Similarly, boys in an earlier study reported that more adjustment problems were reported with each additional family transition (Capaldi & Patterson, 1991). Boys who experienced multiple family transitions were more likely to exhibit behavior problems at age 5 than boys who did not experience multiple family transitions (Cooper et al., 2011).

Current literature suggests that multiple family transitions are positively associated with boys' externalizing behaviors, but we know far less about girls' externalizing behaviors or internalizing behaviors for boys and girls. Research has indicated an association between multiple family transitions and adolescent girls' risky behavior (Fomby & Cherlin, 2007), but little is known about younger girls' externalizing or internalizing behaviors as they relate to multiple family transitions. The current study will add to the growing body of literature by examining how gender moderates the direct and indirect effects of multiple family transitions and child behavioral and academic outcomes. Based on the mixed results from previous literature, I propose the following research questions:

Research Question 1.1: How does child gender affect the association between multiple family transitions and child externalizing behavior?

Research Question 2.1: How does child gender affect the association between multiple family transitions and child internalizing behavior?

Research Question 3.1: How does child gender affect the association between multiple family transitions and child verbal ability?

Maternal Race/Ethnicity

There have been varying results on the moderating effects of race on the relationship between multiple family transitions and children's behavioral outcomes. Most early studies concluded that children who experienced a parental separation are more likely to experience lower academic achievement, more internalizing problems, and more externalizing problems (Amato, 2001). A study found that the effect of parental separation on students' academic success was different for Black and White students depending on when the transition occurred (Smith, 1997).

Of the few studies that examined multiple family transitions and child well-being, the majority have reported that there are stronger associations between multiple family transitions and children's behavioral outcomes for White children than for Black children (Fomby & Cherlin, 2007; Fomby, Mollborn, & Sennott, 2010). In one of the few studies that specifically looked at Black, White, and Hispanic children, multiple family transitions had a greater negative effect on Black children's cognitive achievement than on White or Hispanic children's cognitive achievement (Lee & McLanahan, 2015).

One of the benefits of the Fragile Family and Child Well-Being (FFCW) data (the data set being used in the present study) are in the diversity of the participants and the ability to assess how ethnicity might moderate the relationship between multiple family transitions and children's behavioral outcomes and verbal ability. This is a particularly important gap to fill given the growing number of Hispanic families in the United States.

Due to the lack of previous empirical data, I am not making a hypothesis related to the direction or strength of effects for Hispanic mothers.

How will race/ethnicity moderate the direct and indirect effects of multiple family transitions, maternal well-being, and children's outcomes (Figure 1)?

Hypothesis 1.5: The positive association between multiple family transitions and externalizing behaviors will be stronger for children of White mothers than for children of Black mothers.

Hypothesis 1.6: There will be a positive relationship between multiple family transitions and children's externalizing behaviors for children of Hispanic mothers, but no prediction is made regarding how this effect will compare to children of White and Black mothers.

Hypothesis 2.5: The positive association between multiple family transitions and internalizing behaviors will be stronger for children of White mothers than for children of Black mothers.

Hypothesis 2.6: There will be a positive relationship between multiple family transitions and children's internalizing behaviors for children of Hispanic mothers, but no prediction is made regarding how this effect will compare to children of White and Black mothers.

Hypothesis 3.5: The negative association between multiple family transitions and verbal ability will be stronger for children of White mothers than for children of Black mothers.

Hypothesis 3.6: There will be a negative relationship between multiple family transitions and children's verbal ability for children of Hispanic mothers, but no prediction is made regarding how this effect will compare to children of White and Black mothers.

Contribution of the Proposed Study

The current study offers several unique characteristics that will add to the knowledge base regarding multiple family transitions. Transitions are examined as both the number of family structure changes and the type of transitions that occurs. Additionally, data are longitudinal and therefore able to capture a process rather than a single point in time.

This study will focus on the number and type of transitions that have altered the family structure the child was born into and the argument that factors outside of the number of family transitions and family structure alone contribute to parent and child outcomes. By explicating the number of transitions and family structure, alongside maternal indirect effects, readers will be able to better understand the implications of family structural transitions and some of the mechanisms through which children are being affected.

Additionally, previous studies have not considered the heterogeneity of “non-traditional” families. Studies that examined family structure at a single point in time may have confounded the effect of multiple transitions by masking differences stemming from previous transitions that were present in the current family structure but that were not taken into account in a cross sectional design. For example, remarriage was generally

viewed as a positive transition such that it brings more income and social support into the home (Osborne et al., 2012). However, there is some evidence that family members are still affected by previous transitions. Children of divorce who lived in a stepfamily were found to score the same or worse than children of divorce who lived in single parent headed homes on measures of academic achievement (Jeynes, 1999). It could be that the additive effect of family transitions confounded family structure with previous family transitions, because studies on children of divorce or children in stepfamilies may have found more problematic behaviors than children in two parent biological or single parent families (Amato, 2005) because of the number of previous family structural transitions rather than to their current family structure. This study will add to current literature by beginning to explicate the number of transitions a family experiences and the type of family structure that is a result of transitions.

Furthermore, a study may only be examining children of divorce, but within that group of children who have experienced a parental divorce, there may be children who were born to a single mother who subsequently got married and then divorced, children who were born into two parent families and the parents separated, or a number of other possible combinations. However, for this study, a child born to a single mother who does not later cohabit or marry does not experience any change in family structure and therefore has zero family transitions. This approach provides a unique perspective that, unlike most early research on families, focuses not on comparisons between “nuclear” families (that consist of first time married parents) and “non-traditional” families (that consist of either single parents, divorced parents, or remarried parents), but, in part,

isolates and focuses on the number of transitions (Figure 1). The design of the current study will allow us to specifically look at how the number of transitions affects mother's mental health and subsequently, children's behavior and verbal ability. Understanding the pathways through which children are impacted as they navigate multiple family transitions is an important step in narrowing a research gap in family research.

Relationship transitions begin well before any legal documents are signed or vows are spoken and extend well after assets are separated or families begin a new life together. A snapshot of one point in time assumes the event (in this case a marital transition) is discrete, rather than a process that unfolds over time (Barber & Demo, 2006). Cross-sectional designs have yielded informative results over the years, but are more susceptible to threats to internal validity and lack the ability to make causal conclusions (Shadish, Cook, & Campbell, 2002). Longitudinal designs address some of these limitations and have the capacity to examine years of data and advance our understanding of how children cope with, and are affected by, multiple family transitions over time. Longitudinal designs are key for claiming causality by establishing time order, along with a relationship between the variables and being able to account for additional constructs that might affect relationships between the variables (Shadish et al., 2002). Two conditions, time order and establishing a relationship between variables, are relatively straightforward and met by the FFCW data and proposed analyses. However, the inclusion of within-group comparisons in the design of the proposed study will add to the literature by examining links between multiple family transitions and children's outcomes and the processes that may shape these associations.

CHAPTER III

METHODS

Participants

Data from the Fragile Families and Child Wellbeing Study (FFCW) were used for the current study. The FFCW is a longitudinal study that includes 4,898 children from 20 cities from across the United States with populations greater than 200,000. Children in the study were born between 1998 and 2000. Nonmarital births were oversampled, resulting in a sample with a variety of family structures represented, including families who are more likely to experience multiple family transitions. Data were initially collected in hospitals at the birth of the focal child. Families were followed up when the focal child was 1, 3, 5, and 9 years old. Parents were asked detailed information at each interview about their own relationships and health, their children, and their families. The original sample included 52.43% male focal children and 47.55% female focal children; 21.03% White mothers, 47.50% Black mothers, 27.30% Hispanic mothers, and 3.96% reported Other. During moderation analyses including ethnicity, participants who responded with Other were not included in the analysis.

Missing Data

The FFCW data has attrition, as is expected in longitudinal data, with the most missingness occurring in the final wave. *Mplus* reports covariance coverage for each model to represent missing data patterns. The higher the coverage, the less missingness

there is in the data. Covariance coverage tables for each model can be seen in Table 5 (for tables, see Appendix A), ranging from 63 to 100% coverage (or non-missingness). Data can be missing completely at random (MCAR), meaning that missing data are not correlated with any variable and there is no pattern for missing data. Data can also be missing at random (MAR), where missingness can be explained by either another variable or a set of variables in the data. Data not missing at random (NMAR) occurs when MAR assumptions are held.

MAR cannot be tested and it is rare for MCAR to hold unless missingness is planned, which it is not in the FFCW (Little & Rubin, 2002; Muthén, Muthén, & Asparouhov, 2016). Therefore, based on recommendations by Muthén et al. (2016), missing data were addressed using the full information maximum likelihood (FIML) approach, where missing values are not replaced, as with multiple imputation, but estimated with multivariate estimation techniques (Enders, 2001). In a Monte Carlo simulation study, FIML was found to outperform other methods for handling missing data such as listwise deletion, pairwise deletion, and imputation in structural equation models for both MCAR and MAR data (Enders & Bandalos, 2001).

Measures

Multiple Family Transitions

Each interview included an in-depth questionnaire completed by the mother about who currently resides in the home and who has lived in the home since the last interview. This set of questions allowed for the creation of a set of measures that assessed family transition and family structure variables (Osborne et al., 2012).

The first variable determined the number of transitions experienced between the focal child's age 1 and age 5. The number of transitions was calculated in Stata/SE v. 14.2 by using a set of relationship variables related to the mother's current relationship with the child's father and/or current partner and another set of variables that asked if the mother was with a new partner since the last wave of data (Osborne et al., 2012). At each wave mothers were asked questions regarding their current relationship with the focal child's father (e.g., married, romantic cohabiting, romantic no visit, friends, no relationship, unknown). If they were not in a romantic relationship with the focal child's father, they were asked a set of questions about their current relationship status (i.e., married, cohabiting). Using this set of questions, a new set of variables was created that determined the mother's current family structure at each wave (i.e., married/cohabiting, social father, single). To calculate the number of transitions between each wave another new variable was created using the current family structure variable and a variable that asked if mothers' partner was new since the last interview. Once this was done for all waves, the transition variables were summed for a total number of transitions. Over the course of four years, 59.78% ($n=2,496$) families experienced 0 family transitions, 23.50% ($n=981$) families experienced 1 family transitions, 9.60% ($n=401$) families experienced 2 family transitions, and 7.11% ($n=297$) families experienced three or more family transitions.

A second set of variables was created to assess the type of family transition that occurred, if there had been at least one such transition. The number of family transitions included changes in household romantic relationships, and importantly, did not

distinguish between married and cohabiting relationships. Consistent with Osborne et al.'s (2012) approach, stability and transition was based on the Wave 2 (child was 1 year old) and Wave 4 (child was 5 years old) data. Family transition categories were broken down into two general categories, each with three subcategories. The first general category included stable families, with subcategories of stable two-parent, biological family (39.38%, $n=1490$); stable single mother family (16.99%, $n=643$); and stable social father family (1.43%, $n=54$). The second general category included families that have had at least one family transition, with subcategories of transition to two-biological parent family (5.81%, $n=220$); transition to social-father family (16.46%, $n=623$), and transition to single-mother family (19.93%, $n=754$).

Children's Externalizing Behaviors

Child externalizing behaviors were conceptualized as aggressive and rule-breaking behaviors. The aggressive and rule-breaking subscales from Achenbach's Child Behavior Checklist (CBCL; Achenbach & Rescola, 2001) were used in the FFCW and are one of the most common ways to operationalize child externalizing behaviors. Mothers were asked to rate their child's behavior on questions such as "Child is cruel, bullies, or shows meanness to other", "Child has temper tantrums or a hot temper" on a scale of 1 (*not true*) to 3 (*very true or often true*). An overall externalizing behavior scale was created by the summation of the two subscales (Lee & McLanahan, 2015). The final externalizing scale was adequately reliable ($\alpha=.86$).

Children's Internalizing Behaviors

Child internalizing behaviors were measured using the withdrawn/depressed and anxious/depressed subscales of the Child Behavior Checklist (CBCL; Achenbach & Rescola, 2001). Children who exhibit withdrawn/depressed characteristics are often sad, withdrawn, and unhappy. Children who exhibit anxious/depressed characteristics are often fearful and cry more often than children who are not anxious/depressed. The two subscales were summed to create an overall internalizing behavior scale (Lee & McLanahan, 2015). The final internalizing scale was moderately reliable ($\alpha=.84$).

Children's Verbal Ability

The Peabody Picture Vocabulary Test-Revised (PPVT-R) measures children's vocabulary both the size and the range of the words. The PPVT-R was used in waves 3, 4, and 5 of the FFCWs to assess children's academic success (Cooper et al., 2009; Lee & McLanahan, 2015). The PPVT-R is a widely-used assessment that is well established as a reliable and valid measure of current verbal ability (Bracken & Murray, 1984).

Maternal Depressive Symptoms

Maternal depressive symptoms were measured using the Composite International Diagnostic Interview – Short Form (CIDI-SF), Section A (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). The CIDI-SF has been standardized for use cross-culturally to assess mental disorders. Section A corresponds to diagnoses based on the DSM-IV. Maternal depressive symptoms were not measured until Wave 2. The CIDI-SF has been extensively used to measure depressive symptoms (Gigantesco & Morosino, 2008; Kessler et al., 1998) and has also been used with this population (Osborne et al., 2012).

All participants in Wave 2 were asked the first question, “During past 12 months, have you ever been depressed/sad/blue for 2+ weeks?” Only participants who responded with yes to this first question were asked subsequent questions about depression; therefore, this measure is highly, positively skewed. To account for the nonnormality of maternal depressive symptoms, robust standard errors were used for estimation. Respondents who answered yes to the initial question were asked seven additional questions such as if “there had ever been a time lasting two weeks or more when you lost interest in most things like hobbies, work, or activities that usually give your pleasure?” and “Did you have more trouble falling asleep than you usually do?” A composite scale consisting of the sum of the scores on all items was computed. The reliability for the full scale was relatively high ($\alpha = .94$).

Maternal Parenting Stress

Maternal parenting stress is defined as stress that is specifically related to the domain of parenting. Mothers were asked at each wave how strongly they agree or disagree (on a 4-point scale) with questions such as “Being a parent is harder than I thought it would be” and “I feel trapped by my responsibilities as a parent.” Mothers’ responses were averaged together to create a composite score for maternal parenting stress at Wave 4. These four questions have been used previously with the FFCW dataset, although their reliability was relatively moderate ($\alpha = .66$) (Cooper et al., 2009; Osborne et al., 2012).

Focal Child Demographics

Child gender, male or female, was assessed at baseline using a mother reported, demographic questionnaire. Maternal race/ethnicity was also assessed at baseline during a self-reported demographic questionnaire. Race/ethnicity will be categorized as African American, European American, or Hispanic and measured using a set of dummy variables.

Control Variables

Maternal education was included as a control variable based on previous research that has shown associations between maternal education and children's outcomes (Brody & Flor, 1998). Although it is not the central aim of this study, it is likely that maternal education is important and therefore, I statistically controlled for it. Mothers reported maternal education at wave 1 (some high school, high school diploma, some college, and college degree or higher) was used (Cooper et al., 2011).

Household income was included as income has been extensively studied in studies that have used FFCW data. Studies have shown that stable two parent families are less likely to use programs such as the Food Stamp Program than families with a stable, single parent or families that have experienced multiple family transitions (Hernandez & Ziol-Guest, 2009). Additionally, higher levels of income have been associated with two-parent families (Berger & McLanahan, 2015).

A loss or gain of income has been empirically associated with multiple family transitions and maternal well-being (Osborne et al., 2012). Household income was operationalized using a variable constructed by the FFCW data team using items

answered primarily by mothers at each wave. The constructed income variable was originally created using categories, with about 25% of respondents missing data. The FFCW data team addressed the missing data by imputing the mean value of bracketed household income data (at baseline) when it was provided. If neither parent reported income in any form Stata's regression-based impute command imputed the data based on covariates for mother and father: city, age, years of education, race/ethnicity, earnings, immigrant, employed last year, hours worked, total adults in the household, earning, received welfare, and marital status. If mothers were not cohabitating or married, imputation was completed using the same covariates (Fragile Families public guide 0-5).

Plan of Analysis

There were several steps of analysis. First, descriptive statistics for the main variables were conducted and presented. Raw data were examined for multicollinearity among independent and mediating variables, multivariate normality, relative variances, and missing data. Multicollinearity occurs when two measures are highly correlated, indicating they are measuring a very similar or the same construct. To avoid multicollinearity, the number of family transitions and family structure transitions were modeled separately. Multivariate normality requires a normal distribution and nonnormal data were accounted for with the use of robust standard error terms as recommended (Muthén et al., 2016). Bias corrected bootstrapped confidence intervals were used to estimate indirect effects as they have been shown to be a valid and robust method for testing indirect effects and reducing Type I error (Hayes, 2009; Muthén et al., 2016; Williams & MacKinnon, 2008).

Direct and Indirect Path Models

A structural model was used to evaluate the hypotheses related to direct and indirect effects (Kline, 2011). Although there is temporal precedence in the path models, causality will be cautiously interpreted due to the inability to rule out all alternative explanations of the observed relations between the independent and dependent variables.

Although model fit statistics are standard practice for assessing overall model fit, the proposed path models were fully saturated and traditional fit indices were not estimated for fully saturated models because the covariance matrix is reproduced. However, statistical models are approximations; even models that would result in good fit are not necessarily true, but only plausible (MacCallum & Austin, 2000). Good model fit only indicates the model is plausible; therefore, strong theoretical and empirical bases are important to inform the model.

Model chi-square is sensitive to sample size, such that the higher the N, the more likely it is that the chi-square will be significant (Kline, 2011). The model chi-square test is also sensitive to multivariate non-normality, correlation size, and unique variance. Data were examined for assumptions and appropriate steps were taken, most notably the use of robust standard errors, to account for non-normal data (Kline, 2011; Muthén et al., 2016). The MLR (maximum likelihood robust standard errors) command in *Mplus* provided robust standard errors using a sandwich estimator (Muthén et al., 2016).

Direct and Indirect Effects of the Number of Multiple Family Transitions

The direct and indirect effects of multiple family transitions were simultaneously tested in three individual path models examining maternal depressive symptoms and

parenting stress when children were aged 5 and children's externalizing and internalizing behaviors and verbal ability at age 9 (See Figure 1). A rejection of the null hypothesis indicates that children who experience higher numbers of family transitions will exhibited higher levels of externalizing and internalizing behaviors and lower scores on the academic assessment than children with fewer family transitions. The total effect was assessed by adding the direct effect and the indirect effect together. The indirect effect is calculated as the product of a and b , and the direct effect is c (Hayes, 2009).

Traditionally, mediation analyses followed 4 steps as outlined by Baron and Kenny (1986). The first step was to establish a correlation between the predictor and the outcome variable, the second step was to establish a correlation between the predictor and the mediator variable(s), and the third step was to establish that the mediator affects the outcome variable (Baron & Kenny, 1986; Kenny, 2016). The fourth step supports full mediation if, when controlling for the mediating path and the direct path is reduced to non-significance. After these steps were completed partial or full mediation was inferred if the direct effect approached or reached zero when mediators were included in the model.

Modern analyses follow that steps 2 and 3 are essential and steps 1 and 4 are not necessary (Hayes, 2009; Kenny, 2016). One criticism of the traditional 4-step approach is that it is low in power, increasing the likelihood of a false negative (Fritz & MacKinnon, 2007; Hayes, 2009). Additionally, Hayes argued the traditional approach does not test the indirect effect but rather makes assumptions based on a set of tests. This thinking is a conceptual shift from the traditional Baron and Kenny (1986) mediational

model and modern approaches in that traditional approaches rely on inference of a set of hypothesis tests to determine partial or full mediation, while modern approaches quantify the indirect effects (Hayes, 2009).

Proponents of the modern methods for testing mediation argue that if researchers stop looking for mediation, or indirect effects, in the absence of a direct effect, they “may prematurely end the hunt for evidence of the indirect effects” (Hayes, 2009, p. 413). How can there be an indirect effect in the absence of a direct effect? One possibility is referred to as the “suppressor effect” and has been discussed at length by many statisticians, including Kenny (Judd & Kenny, 1981, 2010; MacKinnon, 2008; Zhao, Lynch, & Chen, 2010). It can occur when one effect is positive and another effect is negative, rendering the total effect (i.e., the direct effect) closer to zero than the indirect effect.

Direct and Indirect Effects of Family Structure Transitions

To test differences between types of family structure transitions, a six-level categorical variable was first created to represent always two-biological parent families, always social-father families, always single-mother families, transition to two-biological families, transition to social-father families, and transition to single-mother families.

From the six-level variable, five dummy coded variables were created for analysis.

Always two-biological parent families were used as the reference group because they had the largest group membership ($N=1490$). Based on Hayes and Preacher (2014), a mediation analysis using a multi-categorical independent variable was tested (see Figure 3). Bias corrected bootstrapping confidence intervals were used to determine the

significance of the coefficient (Macho & Ledermann, 2011; Preacher, Rucker, & Hayes, 2007).

Conceptually, the model is the same as a series of dichotomous categorical variables in that groups are compared to a reference group. Analytically, it is not as straightforward. Previously there was not much methodological precedence for multi-categorical indicators and researchers fell back to either re-conceptualizing their research question to fit into a dichotomous categorical variable, collapsed the categories into binary categories, or modified their data in some other way. It is well established that the effects of a multi-categorical indicator cannot be estimated the same as a dichotomous indicator due to “the fact that in order to fully represent the effect of a categorical variable with k mutually exclusive categories on some dependent variable . . . $k - 1$ parameter estimates are needed” (Hayes & Preacher, 2014, p. 455). Bootstrapping will be used to generate confidence intervals to determine the significance of the coefficient (Macho & Ledermann, 2011; Preacher et al., 2007). Bootstrapping has been shown to be a valid and robust method for testing mediation (Hayes, 2009; Williams & MacKinnon, 2008).

Moderation Models of the Number of Multiple Family Transitions

Moderating Effects

Child gender. To test the moderating effect of gender on the direct and indirect effects of multiple family transitions, maternal stress, and child outcomes, I used a multiple group approach. The first model estimation allowed paths to be freely estimated. The second model constrained the paths to test for invariance between groups.

In keeping with previous multiple group moderation tests, the control variables (maternal education and household income) were not constrained, but were allowed to estimate freely across groups (Molina, Alegria, & Mahalingam, 2013). Traditional model fit indices such as model chi-square, root mean square error of approximation (RMSEA), and the comparative fit index (CFI) were used as a guide to determine if the constrained model was a good fit (Kline, 2011).

Maternal race/ethnicity. To test for moderation, a multiple group path analysis was used to test for statistical differences across groups. The first model freely estimated paths across parameters, allowing the model to optimize results within group. A second model constrained the paths to test for invariance. Further probing was not conducted.

CHAPTER IV

RESULTS

Preliminary Analyses

Descriptive Statistics and Correlations

Descriptive statistics are found in Table 1, along with correlations. Correlations were generally in the expected direction; for example, higher numbers of family transitions were associated with higher numbers of mother's depressive symptoms and children's externalizing behaviors.

Controls

As previously discussed, maternal education and household income are potentially related to multiple family transitions and family structure; therefore, they were used as control variables. Mother's education and household income at Time 1 were used as controls on all pathways for all of the path models and their error terms were correlated ($B=28.93$, $\beta=.503$, $p<.001$). Multiple family transitions were associated with maternal education ($B=-.028$, $\beta=-.165$, $p<.001$) and to household income ($B=-5.58$, $\beta=-.192$, $p<.001$).

Focal Analyses

Direct Effects and Indirect Effects

Direct and indirect effects were assessed with path models and analyzed using *Mplus* 7.3. The models were fully saturated and as such fit statistics were not available. Missing data were handled with FIML in *Mplus* and analyses were tested with robust standard errors (MLR) to correct for the non-normality of data. Indirect effects were further tested with bias corrected bootstrapping confidence intervals. Three models were tested, one for each outcome.

Direct and Indirect Effects of Multiple Family Transitions and Family Structure Transitions

Multiple family transitions. Direct and indirect effects were tested individually for each outcome in the model (Figure 1). Indirect effects were tested separately with MLR and bias corrected bootstrapping (Muthén et al., 2016). Parameter estimates and standard errors were similar for both models tested with robust standard errors (MLR) and with bias-corrected bootstrapping with no substantive differences. The exogenous side of the model, multiple family transitions and its effect on maternal depressive symptoms and maternal parenting stress, was the same for all three models, as shown in Figure 2 and Table 2. Multiple family transitions were positively associated with maternal depressive symptoms ($B=.114, \beta=.055, p=.001$), but were not associated with maternal parenting stress. The more transitions mothers experienced in their relationships (i.e., divorce, cohabitation, single), the higher their levels of depression with

no significant effect on their stress specifically related to parenting. Results for the three individual models are reported in the following paragraphs.

Family structure transitions. When testing the direct and indirect effects with a multi-categorical indicator, Hayes and Preacher (2014) recommend using bias-corrected bootstrapping with dummy codes for the groups, with the exception of the reference group. The recommendation stems from previous work that suggests the assumption of normality does not need to be met (MacKinnon, Lockwood, & Williams, 2004; Hayes & Preacher, 2014). The parameter estimates of the exogenous family structure variables and the intervening variables remain the same for all three outcomes and are detailed below. Mothers in the always social father family were more likely than mothers in the reference group (always two-parent biological family) to experience higher levels of maternal parenting stress ($B=.183, \beta=.032, p=.046$), but did not report higher levels of maternal depressive symptoms. Mothers who were always single reported higher levels of maternal parenting stress ($B=.083, \beta=.045, p=.019$) and higher levels of maternal depressive symptoms ($B=.288, \beta=.057, p=.001$) relative to the reference group. Mothers who had transitioned into a two-parent biological family reported higher levels of depression ($B=.394, \beta=.049, p=.006$), but did not report higher levels of maternal parenting stress than did mothers in the reference group. Mothers who had transitioned into a social father family reported higher levels of maternal depression ($B=.245, \beta=.048, p=.008$) than mothers in the reference group. Finally, mothers who transitioned out of a relationship into a single mother family reported higher levels of maternal depressive

symptoms ($B=.486, \beta=.103, p<.001$) but did not report higher levels of maternal parenting stress relative to the reference group.

Externalizing behaviors. Hypothesis 1.1 which stated that children who experience higher numbers of family transitions between age 1 and 5 would score higher on children's externalizing behaviors at age 9 (a1), was supported. Path estimates are reported in Table 2. As hypothesized, there was a positive association between multiple family transitions between age 1 and 5 and children's externalizing behaviors at age 9 ($B=.199, \beta=.051, p=.008$) such that children who experienced more family transitions between age 1 and 5, had more externalizing behavior problems at age 9 than children who experienced fewer family transitions between age 1 and 5.

Hypothesis 1.2 stated that maternal depressive symptoms and maternal parenting stress would indirectly effect the relationship between multiple family transitions and child externalizing behavior such that more family transitions would predict higher levels of maternal depressive symptoms (m1) and maternal parenting stress (m2), which would predict high levels of children's externalizing behaviors (Figure 1, a2). Path estimates are reported in Table 2 and significant coefficients in Figure 2. As previously noted, there was a positive association between multiple family transitions and a) maternal depressive symptoms and b) children's externalizing behaviors at age 9. Hypothesis 7, the indirect effect of multiple family transitions on children's externalizing behaviors through maternal depressive symptoms and maternal parent's stress, was partially supported. Maternal depressive symptoms were positively associated with an increase in children's externalizing behavior ($B=.17, \beta=.090, p<.001$), indicating an indirect effect of

multiple family transitions on children's externalizing behavior through maternal depressive symptoms. Multiple family transitions were not, however, significantly associated with maternal parenting stress, although maternal parenting stress was associated with children's externalizing behaviors ($B=.611$, $\beta=.117$, $p<.001$). There was no indirect effect of multiple family transitions on children's externalizing behaviors through maternal parenting stress. Children who experienced more transitions between age 1 and 5 were more likely to have mothers with higher reported levels of depressive symptoms and were more likely to experience higher levels of externalizing behaviors at age 9 ($B=.039$, 95% CI [.015 to .071], $\beta=.007$).

As stated previously, a six-level variable was created to test differences in the direct and indirect effects of family structure transitions and maternal depression and parenting stress on children's behavioral and academic outcomes. The categories were: always two-biological parent families, always social-father families, always single-mother families, transition to two-biological families, transition to social-father families, and transition to single-mother families. From the six-level variable, five dummy coded variables were created for analysis. Always two-biological parent families were used as the reference group because they had the largest group membership ($N=1490$). A test of direct and indirect effects, using a multi-categorical independent variable, was tested according to recommendations by Hayes and Preacher (2014; see Figures 3a – 3c).

Hypothesis 1.3 stated that children who have always been in a two-parent biological family would have fewer externalizing behavior symptoms at age 9 (Figure 3a, a1-a5) than would children in any of the following family structural transitions (a)

transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family.

Relative to the reference group, always two-biological parent families, there was no relative direct effect between children's externalizing behaviors at age 9 and children who were always living in social father families (Figure 3a, path a1), children in families that had transitioned into a single mother family (Figure 3a, path a5), or children in families that transitioned into two-biological parent families (Figure 3a, path a3).

Relative to the reference group, there was a significant direct effect between externalizing behaviors and being in always single mother families (Figure 3a, path a2; $B=.666$, $\beta=.051$; $p=.013$) or in families that experienced a transition into a social father family (Figure 3a, path a4; $B=.763$, $\beta=.058$; $p=.004$). Relative to the reference group, children in families who always had a single mother and who transitioned into living with a social father experienced more externalizing behaviors while children who always lived with a social father or transitioned into a single mother family did not have significantly different levels of externalizing behaviors. Descriptive statistics are found in Table 1.

Hypothesis 1.4 stated that children who have always been in a two-parent biological family would have smaller indirect effects of maternal depressive symptoms (Figure 3a, b1-b5) and maternal parenting stress (Figure 3a, c1-c5) on the association between family structure and children's externalizing behaviors (Figure 3a, f1-f2) than would children in any of the following family structural groups: (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a

single mother family, (d) always been in a social father family, and (e) always been in a single mother family. After controlling for household income and maternal education, children who lived with the same social father from age 1 to age 5 were more likely than children who lived in a two-parent biological family from age 1 to age 5 to have mothers report higher levels of parenting stress, which led to higher levels of externalizing behaviors ($B=.109$, 95% CI [.009 to .232]). Children in always single mother families were more likely to have higher levels of externalizing behaviors than children in always two-parent biological families. However, this effect operated indirectly through increased maternal parenting stress and increased maternal depressive symptoms ($B=.593$, 95% CI [.210 to 1.023]). Children who transitioned into two-parent biological families were more likely to have mother who reported more depressive symptoms than did children from always two-parent biological families. In turn, more maternal depressive symptoms were positively associated with higher levels of externalizing behaviors ($B=.066$, 95% CI [.023 to .137]). Mothers who transitioned into a social father family from age 1 to age 5, relative to the reference group, reported higher levels of depressive symptoms that were associated with higher levels of children's externalizing behaviors, which suggests an indirect effect of transitioning into a social father family on children's externalizing behaviors through maternal depressive symptoms ($B=.041$, 95% CI [.011 to .087]). Families that had transitioned into single mother families were significantly more likely to have children with higher externalizing behaviors at age 9 relative to families who had always been in two-parent biological families; however, this

effect operated indirectly through higher levels of maternal depressive symptoms ($B=.019$, 95% CI [.0007 to .038]).

Hypothesis 1.5 stated that the association between multiple family transitions and externalizing behaviors would be stronger for children of White mothers than for children of Black mothers and hypothesis 1.6 stated that there would be a negative relationship between multiple family transitions and children's externalizing behaviors for children of Hispanic mothers, but no prediction was made regarding how this effect compared to children of White and Black mothers. The base model was fully saturated and a fully constrained model was tested, with good model fit ($\chi^2=9.646$, $df=12$, $p=.647$; CFI=1.00: RMSEA=.000), indicating there was no moderation by mother's race.

Research Question 1.1 asked how child gender affected the association between multiple family transitions and child externalizing behavior. Again, the base model was fully saturated and a fully constrained multiple model was tested for invariance across groups and there was no evidence of moderation based on model fit ($\chi^2=4.210$, $df=6$, $p=.648$; CFI=1.00: RMSEA=.000).

As a follow-up, a six-group model comparison was tested against a fully saturated model, and again, there was excellent model fit, ($\chi^2=25.251$, $df=30$, $p=.713$; CFI=1.00: RMSEA=.000), suggesting that after accounting for household income and maternal education, multiple family transitions, directly and indirectly, affects families in the same way across racial and gender groups.

Internalizing behaviors. Hypothesis 2.1 stated that children who experienced higher numbers of family transitions between ages 1 and 5 would have higher symptoms

of children's internalizing behaviors at age 9 (Figure 1, b1). This hypothesis was not supported. Path estimates are reported in Table 2; the direct effect of multiple family transitions on children's internalizing behaviors at age 9 was not significant.

Hypothesis 2.2 stated that maternal depressive symptoms and maternal parenting stress would indirectly affect the relationship between multiple family transitions and child internalizing behavior such that more family transitions would predict higher levels of maternal depressive symptoms (m1) and maternal parenting stress (m2), which would predict higher levels of children's internalizing behaviors (Figure 1, b2). The path estimates are reported in Table 2 and significant coefficients can be seen in Figure 2. As previously noted, there was not a significant association between multiple family transitions and child internalizing behaviors. Hypothesis for hypothesis 2.2 was, thus, partially supported. There was a significant positive association between maternal depressive symptoms and child internalizing behaviors ($B=.259, \beta=.117, p<.001$), indicating an indirect effect between multiple family transitions on children's internalizing behavior through maternal depressive symptoms. Although there was not an association between multiple family transitions and maternal parenting stress, there was a significant association between maternal parenting stress and children's internalizing behaviors ($B=.841, \beta=.138, p<.001$). There was an indirect effect of multiple family transitions on children's internalizing behaviors through maternal depressive symptoms ($B=.029, 95\% \text{ CI } [.011 \text{ to } .055], \beta=.138$).

Hypothesis 2.3 stated that children who have always been in a two-parent biological family would have exhibit fewer internalizing behaviors at age 9 (Figure 3b,

a1-a5) than would children in any of the following family structural transition groups: (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family. Relative to children in always two-parent biological families, there were no significant direct effects for children in other family structures and internalizing behaviors.

Hypothesis 2.4 stated that children who have always been in a two-parent biological family would have smaller indirect effects of family structure and children's internalizing behaviors through both maternal depressive symptoms (Figure 3a, b1-b5) and maternal parenting stress (Figure 3b, c1-c5) than would children in any of the following family structural transitions a) transition into a two-parent biological family, b) transition into a social father family, c) transition into a single mother family, d) always been in a social father family, and e) always been in a single mother family. After controlling for household income and maternal education, mothers who were in always social father families did not have a significant indirect effect through maternal depressive symptoms, but there was an indirect effect of being in an always social father family on children's internalizing behaviors through maternal parenting stress ($B=.156$, 95% CI [.019 to .331]). There was an indirect effect between being in an always single mother family and children's internalizing behaviors through both maternal depressive symptoms and maternal parenting support for a significant total effect ($B=.145$, 95% CI [.065 to .230]), but no significant direct effect. There was an indirect effect between transitioning into a two-parent biological family and children's internalizing behaviors

through maternal depressive symptoms ($B=.102$, 95% CI [.033 to .201]), but not maternal parenting stress. Children's internalizing behaviors in families that have transitioned into social father families were indirectly affected by maternal depressive symptoms ($B=.063$, 95% CI [.018 to .125]), but not by maternal parenting stress. There was an indirect effect between being in a family who had transitioned into a single mother family structure and children's internalizing behaviors through maternal depressive symptoms ($B=.126$, 95% CI [.073 to .200]), but not through maternal parenting stress .

Hypothesis 2.5 stated that the association between multiple family transitions and internalizing behaviors would be stronger for children of White mothers than for children of Black mothers and hypothesis 2.6 stated there would be a negative relationship between multiple family transitions and children's internalizing behaviors for children of Hispanic mothers, but no prediction was made regarding how this effect will compare to children of White and Black mothers. However, a model was tested constraining all paths to be equal across all three groups, and model fit was adequate ($\chi^2=10.213$, $df=12$, $p=.597$; CFI=1.00; RMSEA=.000). A two-group model was used to test moderation for child gender and the model fit was excellent, suggesting that there was no evidence of moderation ($\chi^2=4.655$, $df=6$, $p=.589$; CFI=1.00; RMSEA=.000). As before, a six-group model was tested and model fit was good, indicating no moderation across groups ($\chi^2=27.568$, $df=30$, $p=.593$; CFI=1.00; RMSEA=.000).

Verbal ability. Hypothesis 3.1 stated that children who experienced higher numbers of family transitions between ages 1 and 5 would report lower verbal ability at age 9 (Figure 1, c1). Path estimates are reported in Table 2. There was a negative

association between multiple family transitions and children's verbal ability such that children who experienced more transitions, scored lower on verbal ability than children who experienced fewer transitions ($B = -1.165$, $\beta = -.052$, $p = .001$).

Hypothesis 3.2 stated that there would be an indirect effect on multiple family transitions on children's verbal ability through maternal depressive symptoms (Figure 1, m1) and maternal parenting stress (Figure 1, m2). Path estimates are reported in Table 2 and shown in Figure 2. As previously noted, there was not a significant association between multiple family transitions and maternal parenting stress. Additionally, there was not an association between maternal depressive symptoms and children's verbal ability. Therefore, the hypothesis was not supported, as there were no indirect effects of multiple family transitions on children's verbal ability. There was a significant association between maternal parenting stress and children's verbal ability ($B = -1.386$, $\beta = -.046$, $p = .005$). Although there were singular significant paths in the model, there were no significant indirect pathways.

Hypothesis 3.3 stated that maternal depressive symptoms and maternal parenting stress would indirectly effect the relationship between multiple family transitions and children's verbal ability such that more family transitions would predict higher levels of maternal depressive symptoms (Figure 3, m1) and maternal parenting stress (Figure 3, m2), which would predict lower scores on children's verbal ability (Figure 3, c2). Children who were in always single mother families ($B = -3.227$, $\beta = -.059$; $p = .002$), families who transitioned into a two-parent biological family ($B = -2.887$, $\beta = -.033$;

$p=.038$), or into a social father family ($B = -3.773$, $\beta = -.068$; $p < .001$) scored lower on verbal ability than children in two-parent biological families.

Hypothesis 3.4: Children who have always been in a two-parent biological family would have smaller indirect effects of maternal depressive symptoms (Figure 3a, b1-b5) and maternal parenting stress (Figure 3c, c1-c5) on the association between family structure and children's verbal ability (Figure 3c, f1-f2) than would children in any of the following family structural transition groups (a) transition into a two-parent biological family, (b) transition into a social father family, (c) transition into a single mother family, (d) always been in a social father family, and (e) always been in a single mother family. Children's scores on verbal ability, relative to the reference group, were lower for children whose mothers reported higher levels of maternal parenting stress and were in always social father families ($B = -.237$, 95% CI $[-.661$ to $-.025]$) or always single mother families ($B = -.107$, 95% CI $[-.274$ to $-.016]$).

Hypothesis 3.5 stated that the association between multiple family transitions and children's verbal ability would be stronger for children of White mothers than for children of Black mothers and hypothesis 3.6 stated there would be a negative relationship between multiple family transitions and children's verbal ability for children of Hispanic mothers, but no prediction was made regarding how this effect would compare to children of White and Black mothers. However, a model was tested constraining all paths to be equal across all three groups, and model fit was adequate ($\chi^2 = 12.598$, $df = 12$, $p = .399$; CFI = .999; RMSEA = .006). A two-group model was used to test moderation for child gender and again there was no evidence for moderation

($\chi^2=8.029$, $df=6$, $p=.236$; CFI=.998; RMSEA=.000). As before, a six-group model was tested and model fit was good, indicating no moderation across groups ($\chi^2=36.716$, $df=30$, $p=.186$; CFI=.989; RMSEA=.000).

CHAPTER V

DISCUSSION

The goals of the current study were to gain a better understanding of how multiple family transitions (a change to the family structure), both in number of transitions and type of transition, directly and indirectly influence children. Although family structures such as single-parent families and stepfamilies have been studied at length (see Amato, 2010; Cherlin, 2009), the process through which families transition from one family structure to another and the cumulative effect of multiple family transitions on family members have not been extensively examined. Hypotheses and research questions for this study were drawn from the life course perspective, social stress theory, and recent work on multiple family transitions, or family instability (e.g., Cooper et al., 2011; Fomby & Osborne, 2017; Fomby & Cherlin, 2007; Osborne et al., 2012).

The life course perspective and social stress theory were used to theorize that multiple family transitions would be positively associated with children's internalizing and externalizing behaviors and negatively associated with children's verbal ability. In addition, the proposition of linked lives from the life course perspective was used to hypothesize that mother's depressive symptoms and parenting stress, as related to multiple family transitions, would be associated with children's behavioral and verbal ability. Social stress theory was utilized to hypothesize the potential negative effect that

both positive and negative transitions would have on mothers and the subsequent effect of both multiple family transitions and maternal outcomes on children over time.

Multiple Family Transitions

Results suggested that multiple family transitions had a positive association with children's externalizing behaviors and a negative association with children's verbal ability such that children who experienced multiple family transitions before age 5 were more likely than their peers who had experienced fewer family transitions to exhibit higher levels of externalizing behaviors and lower verbal ability at age 9, with no direct association between multiple family transitions and children's internalizing behaviors. These findings support hypothesis 1.1 and 3.1, but do not support hypothesis 2.1. They are consistent with previous literature that has found that children who experienced more family transitions exhibited more externalizing behaviors (Cavanagh & Huston, 2006, 2008; Fomby & Osborne, 2017; Lagenkamp & Frisco, 2008) and had lower verbal scores (Cooper et al., 2009; Fomby & Cherlin, 2009; Sun & Li, 2009) than children who experienced fewer family transitions.

Previous literature has yielded mixed results regarding the association between multiple family transitions and children's internalizing behaviors, even when using the FFCW data. The difference appears to be in the measure used to operationalize internalizing behaviors. In studies such as the current one and Cooper and colleagues (2009), when internalizing behaviors were measured using the sum of the CBCL subscales of anxious/withdrawn and anxious/depressed, there is consistently no direct association between multiple family transitions and internalizing behaviors. However,

Osborne and McLanahan (2007) found a significant association between multiple family transitions and children's anxious/depressed behaviors such that the more family transitions children experienced, the more likely they were to exhibit anxious/depressed characteristics. For the FFCW participants, there is a direct effect on children's internalizing behaviors when the anxious/depressed subscale is used, suggesting that multiple family transitions are associated with anxious/depressed characteristics. The difference in how internalizing behaviors was operationalized likely accounted for the differing results.

Furthermore, there was an indirect effect of multiple family transitions on children's internalizing and externalizing behaviors through maternal depressive symptoms, but not maternal parenting stress. The results indicated that the more family transitions a mother experienced, the more depressive symptoms she reported, but multiple family transitions were not associated with maternal parenting stress. It is possible the parenting stress measure was not able to adequately capture parenting stress given that the measure contained only four items and returned a mediocre alpha ($\alpha=.66$). A more robust measure of parenting stress, such as Abidin's (1995) widely used Parenting Stress Index (PSI), might have yielded different results. Previous studies, using the FFCW and the same parenting stress measure, found associations between maternal transitions (including both coresidential and dating relationships) and parenting stress (Beck, Cooper, McLanahan, & Brooks-Gunn, 2010). The current study did not include dating relationship transitions in the calculation of the family transitions variable, which was similar to Osborne et al.'s (2012) approach. The difference in how

relationship transitions were calculated could account for the differences in the results. It is also possible that parenting stress was too specific of a domain and a broader measure of generalized stress might produce different results, particularly after taking household income into account in the model. A more well-rounded measure of stress that included parenting stress, financial stress, work stress, and relationship stress could provide a more holistic picture of the stress that mothers who experience multiple partnership changes experience and how the stress affects their children (Fomby & Osborne, 2017; Osborne & McLanahan, 2007). Below, results pertaining to each of the child outcomes will be discussed.

Externalizing Behaviors

Previous literature is consistent with the current study's finding that multiple family transitions were positively associated with increases in children's externalizing behaviors (Cavanagh & Huston, 2006; Fomby & Osborne, 2017; Osborne & McLanahan, 2007). Previous literature has linked multiple family transitions to maternal depressive symptoms, consistent with the current study, but has not extended the results to children's externalizing behaviors in the same study. However, maternal depressive symptoms have previously been associated with children's externalizing behaviors (Goodman et al., 2011). Results from the current study suggest that the more family transitions a mother experienced, the more likely she was to experience depressive symptoms and the more likely children were to exhibit externalizing behaviors four years later. The current study's results indicated that multiple family transitions were indirectly associated with children's externalizing behaviors at age 9 through an association with maternal

depressive symptoms when the child is 5 years old. This finding suggests that the long reaching effects of multiple family transitions persist, at least in part, through mechanisms outside of the family transitions themselves, such as maternal depression.

Internalizing Behaviors

The indirect effect of multiple family transitions on internalizing behaviors through maternal depressive symptoms partially supports life course's linked lives proposition that individuals in a family are inextricably linked and influence each other. The current study replicates previous work that suggests maternal depressive symptoms were associated with children's internalizing behaviors (Cummings et al., 2005; Goodman et al., 2011) and extended previous work by examining maternal depressive symptoms as a mechanism explaining the relation between multiple family transitions and children's internalizing behaviors. Children's internalizing behaviors were not directly associated with multiple family transitions; in the current model, it was only through mother's depressive symptoms that children's internalizing behaviors were associated with multiple family transitions. There are several implications of these results at both the macro and micro level. Although there were no direct associations between multiple family transitions and children's internalizing behaviors, the indirect effect of multiple family transitions on children's internalizing behaviors through maternal depressive symptoms is important. As families experience more family transitions, mothers were more likely to report depressive symptoms that were associated with children's internalizing behaviors 4 years later. Findings reiterate the importance of examining both direct and indirect effects. By gaining a better understanding of the

mechanisms through which multiple family transitions, maternal depressive symptoms, and children's internalizing behaviors are linked, family scientists have a more holistic view of how families navigate transitions and the potential outcomes for parents and children.

Verbal Ability

Consistent with previous literature, there was a direct association between multiple family transitions and children's verbal ability at age 9 such that the more family transitions that occurred, the lower children scored on a test of verbal ability (Cooper et al., 2011; Martinez & Forgatch, 2002; Sun & Li, 2009). Cooper and colleagues used the FFCW data and found the same association between multiple family transitions and children's verbal ability at age 5. The current study measured multiple family transitions during the same time frame (before age 5), but measured verbal ability at age 9 and found the same negative association, suggesting that early family transitions have a continued direct association with later verbal ability.

However, after controlling for household income and maternal education, the indirect effect hypothesis was not supported. This was due in part to the lack of a significant association between maternal depressive symptoms and children's verbal ability and in part because multiple family transitions were not associated with maternal parenting stress. Previous research that reported negative associations between maternal depressive symptoms and children's verbal ability measured maternal depressive symptoms (Bagner, Pettit, Lewinson, & Seeley, 2010; Sohr-Preston & Scaramella, 2006) and children's verbal ability (Cox, Puckering, Pound, & Mills, 1987; Kiernan & Huerta,

2008) when children were younger than children in the current study. It is possible that maternal depressive symptoms during infancy have a more lasting influence on children's later verbal ability than maternal depressive symptoms during toddlerhood. Additionally, when children are older studies often used more holistic cognitive assessments as opposed to singularly constructed verbal ability assessments such as the one used in this study (Jensen, Dumontheil, & Barker, 2014; Sun & Li, 2009). Previous work has also shown that maternal depressive symptoms were not related to children's cognitive development after taking maternal caregiving into account (Stein, Malmberg, Sylva, Barnes, & Leach, 2008) so it is likely that other mechanisms not taken into account in the current study were influencing children's verbal ability. Further studies should examine other possible indirect effects of the association between multiple family transitions and children's verbal ability other than maternal depressive symptoms and maternal parenting stress (Stein et al., 2008; Waldfogel et al., 2010).

Moderating Effects

The direct and indirect effects of multiple family transitions on children's externalizing, internalizing, and verbal ability through maternal depressive symptoms and maternal parenting stress were each tested for the potential moderating effects of race and gender. These findings suggest that, after controlling for household income and maternal education, the effects of multiple family transitions were the same for boys and girls and for children of White, Black, and Hispanic mothers.

Previous research produced mixed findings in regards to multiple family transitions and child gender. Early studies indicated that boys' behavior was more

affected by multiple family transitions than girls (Capaldi & Patterson, 1991; Cooper et al., 2011), while later studies indicated no gender moderation of the relation between divorce and child adjustment (Sun & Li, 2009). Interestingly, Cooper and colleagues, using the FFCW data and ordinary least squares regression, found significant moderation effects for gender between multiple family transitions and children's externalizing and internalizing behaviors and verbal ability. One notable difference was that Cooper et al. measured children's outcomes at age 5, concurrently with maternal mental health, and included additional maternal characteristics as controls (as well as baseline household income and maternal education) such as mother's age at birth of first child, immigration status, and maternal relationship history while the current study measured mother's mental health (depressive symptoms and parenting stress) when children were 5 years old and their outcomes when they were 9 years old. It is possible that gender moderates multiple family transitions and children's outcomes relatively proximal to the transition, but that the moderation effect wanes over time. Future research should examine the effects of multiple family transitions over various lengths of time to determine if there is a differential moderation effect that disappears over time.

There was also no evidence that, after controlling for household income and maternal education, race moderated associations between multiple family transitions and children's externalizing and internalizing behaviors or verbal ability. Previous research indicated that multiple family transitions were more strongly associated with negative outcomes for White children, but not with Black children and did not include Hispanic children (Fomby & Cherlin, 2007). An advantage of the FFCW dataset is the attention

that was given to participants' diversity, particularly in terms of race. At baseline, 21% of mothers reported their race as White, 47% as Black, and 27% as Hispanic; whereas, in earlier studies a greater percentage of Black families and Hispanic families were not included. It is difficult to extrapolate comparisons of results of studies with different samples, leaving unanswered questions regarding the role of race in the associations between multiple family transitions and maternal and child well-being.

When race and gender were combined for a six-group model comparison, there were still no significant moderation effects. This finding suggests that multiple family transitions were associated with maternal and child well-being similarly across race and gender.

Multiple Family Structure Transitions

Always Social Father Families

There were no differences in externalizing behaviors, internalizing behaviors, or verbal ability between children in always social father families and children living in always two-parent biological families. The positive relationship between maternal parenting stress and children's internalizing and externalizing behaviors was stronger for children living in always social father families than for children living in the reference group. The negative relationship between maternal parenting stress and children's verbal ability was stronger for children living in always social father families than for children living in the reference group. Although there are no transitions present in this family structure, stepfamilies have their own set of adjustments. Previous research suggests that the stepparent role can be ambiguous (Fine, 1996). Without a universally agreed upon

role for that of a stepparent, role negotiation is often required before each family member's expectations are met and clarity of the roles is achieved (Fine, Coleman, & Ganong, 1998; Speer & Trees, 2007), potentially creating some stress surrounding parenting within the always social father family structure.

Always Single Mother Families

Children who were living in stable single mother families had higher levels of externalizing behaviors and weaker verbal skills than those living in stable two-parent biological families. The positive relationship between maternal parenting stress and maternal depressive symptoms was stronger for children living in always single mother families than for children living in the reference group. The negative relationship between maternal parenting stress and children's verbal ability was stronger for children living in always single mother families than for children living in the reference group. These findings are consistent with previous literature that has found that single mothers are more likely than married mothers to report higher levels of stress (Cairney, Boyle, Offord, & Racine, 2003) and that children in single mother families are more likely to exhibit externalizing and internalizing problems than children in stable two-parent families (Magnuson & Berger, 2009; Waldfogel et al., 2010). Previous studies have documented the unequal access to resources (financial, social, and health) that single mothers report that could practically result in living in more economically disadvantaged neighborhoods, poorer access to healthcare, poorer quality school districts and schools, and less financial support.

Although always single mother families do not experience a transition, there is substantial literature that documents additional stressors that single mothers face that could explain the relative direct effect of being in a single mother family versus being in a two-parent biological family, including resources available to both the mother and the child, the time the mother is able to spend with her child, family income, father involvement, and social support. While the current study provides a starting point to understanding how family structure and family transitions impact mothers and children, future studies should further examine additional mechanisms that add to our understanding of factors (i.e., parental resources, relationship quality, social support) that influence single mothers' well-being, and subsequently children's well-being).

Transition into Two-Parent Biological Families

Children who transitioned into two-parent biological families had weaker verbal skills than children who had always been in two-parent biological families. There were no relative differences between children who had transitioned into two-parent biological families and children who had always been in two-parent biological families in their levels of externalizing and internalizing behaviors. The positive relationship between maternal depressive symptoms and children's externalizing and internalizing behaviors was stronger for children who had transitioned into two-parent biological families than for children who had always lived in two-parent biological families. This finding supports the theoretical underpinnings of this study that multiple family transitions exert, at minimum, short term stress that is associated with maternal well-being and subsequently children's externalizing and internalizing behavior.

Transition into Social Father Families

Children who had transitioned into social father families had higher levels of externalizing behaviors and less verbal ability than children who had always lived in two-parent biological families. The positive relationship between maternal depressive symptoms and children's internalizing and externalizing was stronger for children who had transitioned into social father families than for children in the reference group. Previous work using the FFCW data that examined transitions into social father families and maternal depressive symptoms and maternal parenting stress was mixed. Osborne et al. (2012) found that mothers who transitioned into a social father family were more likely to report decreased maternal depression and found no association to maternal parenting stress. However, Osborne and colleagues were examining changes in, not levels of, maternal mental health, an important distinction when examining the landscape of literature on multiple family transitions. Transitioning into a social father family may decrease depressive symptoms for mothers, but the current study suggests that when compared to mothers who have always been in two-parent biological family structures, levels of reported depressive symptoms are higher.

Transition into Single Mother Families

Children who had transitioned into single mother families had relatively higher levels of externalizing behaviors than children who were always in two-parent biological families. There were no differences between children who had transitioned into single mother families and children who had always been in two-parent biological families in their levels of internalizing behaviors or verbal ability. The positive relationship between

maternal depressive symptoms and children's externalizing behaviors was stronger for children who had transitioned into single mother families than for children in the reference group. Results are consistent with previous research that has linked single motherhood to depressive episodes (Cairney et al., 2003) and supports the theoretical underpinnings of this study that multiple family transitions exert, at minimum, short term depressive symptoms that are associated with subsequent children's externalizing behavior. There was no difference in maternal parenting stress between mothers in single mother families relative to those in two-parent biological families. As mentioned previously, it is possible that a different measure would yield different results or that a measure of generalized stress would more accurately capture the stress of a single mother who has navigated multiple family transitions.

Strengths and Limitations

The FFCW data are rich with detail, but lack a direct measure of family transitions. As such, family transitions were indirectly measured through a series of questions participants were asked at each wave (Osborne et al., 2012). In future studies, a direct question regarding family transitions may more effectively capture the number of family transitions that occur as the current study is likely to be underestimating the number because family transitions were based in part on questions that asked mothers if their current partner was a new partner since that last interview (2 years prior). It is possible that relationships that occurred between waves were not captured. It is practically difficult to find large samples of stable, social father families and the FFCW

data are no different as only 54 families represent this group. A larger sample would provide more power and might yield different results.

As with all non-experimental studies, causality cannot be established; however, the inclusion of indirect effects and disentangling of multiple family transitions and family structure move the literature towards a more holistic picture of how individuals in families navigate through multiple family transitions, their lives connected to each other. The current study adds to a growing body of literature that is changing the landscape of family science and clarifying the distinction between multiple family transitions and family structure, two constructs that have been previously confounded, and that are unique yet intricately linked to one another (Osborne et al., 2012; Waldfogel et al., 2010).

Another limitation of the current study is that children's externalizing and internalizing behaviors are based on mother report only. Further, verbal ability is a rather narrow indicator of cognitive development. Future studies could make use of child and teacher reports of children's externalizing and internalizing behaviors and additional behavioral outcomes and more comprehensive cognitive assessments.

One of the strengths of the FFCW data, as previously mentioned, is that the women were more likely to be unmarried at the birth of the focal child and were at a higher risk to experience poverty and family dissolution (McLanahan, 2009; McLanahan et al., 2003). The participants represent a national sample from 20 large U.S. cities that have been largely unrepresented in research and policies that concern their daily lives.

The current study adds to a small, but growing, body of literature that has begun to examine family structure and family dissolution and formation more in-depth. Rather

than what Barber and Demo (2006) termed a first-tier study that compares children of divorce to children in always two-parent biological families, the current study also drew from their second tier of research by adding potential mechanisms that link family structure to children's outcomes and from their third tier by examining the number of family transitions and various formations of family structure. The use of a longitudinal data set was better able to capture the fluidity of family transitions and allowed for the study of long term effects of multiple family transitions and family structure.

Future Directions

Overall, multiple family transitions and family structure are associated with maternal depressive symptoms and children's behavioral and verbal outcomes, both directly and indirectly. Future directions should include the use of a generalized measure of maternal stress. There are a number of possible variables that may have indirect effects between multiple family transitions and children's outcomes such as household income, parenting quality, and father involvement (Cavanagh & Huston, 2006; McLanahan, 2011). The current study reported a direct effect between multiple family transitions and children's verbal ability, but no indirect effect. Future work should probe other possible indirect effects of multiple family transitions on children's verbal ability through constructs such as school context (Cavanagh & Fomby, 2012) and experiencing poverty (McLanahan, 2009; Schoon, Jones, Cheng, & Maughan, 2012).

Although there is wealth of literature examining how families fare in the midst of divorce, remarriage, and single parenthood, the current study adds to the growing body of literature that examines multiple family transitions and transitions into family structures.

By gaining a better understanding of the lives of families who experience multiple family transitions interventionists and policy makers will be better able to create and reproduce helpful interventions and draft legislation that will better the lives of parents and children.

There are at least 46 state-supported or court-affiliated programs that aim to help families, both parents and children, adjust after a divorce or dissolution, but few focus on other family transitions (Pollet & Lombreglia, 2008). Most programs are parent education courses for divorcing couples, who are encouraged or required by a judge to attend, although few have been evaluated rigorously (deLusé & Braver, 2015). Programs are far from equal in their substance and delivery from mailers to weeks long face-to-face programs. The current study suggests that not all family transitions are the same and programs that aim to help parents and children navigate family transitions should take into account heterogeneity and the various processes that occur over time within families as they form and reform.

The current study indicates there is an indirect effect of transitioning into two-parent family structures (two-parent biological, social father) on children's externalizing and internalizing behaviors through maternal depressive symptoms. These findings have potential implications for public policies, including more affordable and accessible mental healthcare for families as they navigate different family transitions. By offering affordable services, mothers' mental health could be addressed through therapy and/or medication and children's behavioral and verbal outcomes possibly improved.

Additionally, The U.S. Department of Health and Human Services Office of Family Assistance continually promotes healthy marriages and relationships through

funding opportunities, including the Healthy Marriage and Relationship Education Grant Program (HMRE). The current study, consistent with previous studies, found that multiple family transitions, both positive and negative, yield at minimum short term periods of stress and depression for mothers that yield consequences for children (Fomby & Osborn, 2017; Osborne et al., 2012; Osborne & McLanahan, 2007). The benefits of marriage are well documented but the present findings suggest there may be additional stressors inherent in transitioning into two-parent families and policy makers should take those costs should be taken into account (Osborne & McLanahan, 2007).

As families across the United States balance the value of family and the value of individualism, relationships begin and end and family units are formed and reformed. The more we learn about how families fare during and after multiple family transitions and within different family structures, the more salient and effective resources, programs, and policies can be for families.

REFERENCES

- Abidin, R. R. (1995). *Manual for the parenting stress index*.
- Achenbach, T. M., & Rescorla, L. (2001). ASEBA school-age forms & profiles.
- Acock, A.C. (2005). Working with missing values. *Journal of Marriage and Family*, 67, 1012–1028.
- Administration for Children and Families. (2016). *Healthy Marriage and Relationship Grant Program*. Retrieved from <https://www.acf.hhs.gov/ofa/resource/healthy-marriage-grantees>.
- Allison, P. D., & Furstenberg, F. F. (1989). How marital dissolution affects children: Variations by age and sex. *Developmental Psychology*, 25, 540–549.
- Amato, P. R., & Cheadle, J. (2005). The long reach of divorce: Divorce and child well-being across three generations. *Journal of Marriage and Family*, 67, 191–206.
- Amato, P. R. (2001). Children of divorce in the 1990s: An update of the Amato and Keith (1991) meta-analysis. *Journal of Family Psychology*, 15, 355–370.
- Amato, P. R. (2005). The impact of family formation change on the cognitive, social, and emotional well-being of the next generation. *The Future of Children*, 75–96.
- Amato, P. R. (2010). Research on divorce: Continuing trends and new development. *Journal of Marriage and Family*, 72, 650–666.
- Amato, P. R., Loomis, L. S., & Booth, A. (1995). Parental divorce, marital conflict, and offspring well-being during early adulthood. *Social Forces*, 73, 895–915.

- Anthony, C. J., DiPerna, J. C., & Amato, P. R. (2014). Divorce, approaches to learning, and children's academic achievement: A longitudinal analysis of mediated and moderated effects. *Journal of School Psychology, 52*, 249–261.
- Aquilino, W. S. (1994). Interview mode effects in surveys of drug and alcohol use: A field experiment. *Public Opinion Quarterly, 58*, 210–240.
- Aquilino, W. S. (1996). The life course of children born to unmarried mothers: Childhood living arrangements and young adult outcomes. *Journal of Marriage and the Family, 58*, 293–310.
- Bachman, H. J., Coley, R. L., & Carrano, J. (2012). Low-income mothers' patterns of partnership instability and adolescents' socioemotional well-being. *Journal of Family Psychology, 26*, 263–273.
- Bagner, D. M., Pettit, J. W., Lewinsohn, P. M., & Seeley, J. R. (2010). Effect of maternal depression on child behavior: A sensitive period? *Journal of American Academy of Child and Adolescent Psychiatry, 49*, 699–707.
- Barber, B. L., & Demo, D. H. (2006). The kids are alright (at least, most of them): Links between divorce and dissolution and child well-being. *Handbook of Divorce and Relationship Dissolution, 289–311*.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Social and Personal Relationships, 51*, 1173.

- Bauman, S., Russell, B. T., & Walker, J. L. (2013). Associations among bullying, cyberbullying, and suicide in high school students. *Journal of Adolescence*, 36, 341–350.
- Beck, A. N., Cooper, C. E., McLanahan, S., & Brooks-Gunn, J. (2010). Partnership transitions and maternal parenting. *Journal of Marriage and Family*, 72, 219–233.
- Bengtson, V. L., & Allen, K. R. (2009). The life course perspective applied to families over time. In *Sourcebook of Family Theories and Methods* (pp. 469–504). Springer US.
- Berger, L. M., & McLanahan, S. S. (2015). Income, relationship quality, and parenting: Associations with child development in two-parent families. *Journal of Marriage and Family*, 77, 996–1015.
- Bracken, B. A., & Murray, A. M. (1984). Stability and predictive validity of the PPVT-R over an eleven month interval. *Educational & Psychological Research*, 4, 41–44.
- Brody, G. H., & Flor, D. L. (1998). Maternal resources, parenting practices, and child competence in single-parent African American families. *Child Development*, 69, 803–816.
- Cairney, J., Boyle, M., Offord, D. R., & Racine, Y. (2003). Stress, social support and depression in single and married mothers. *Social Psychiatry and Psychiatric Epidemiology*, 38, 442–449.
- Capaldi, D. M., & Patterson, G. R. (1991). Relation of parental transitions to boys' adjustment problems: I. A linear hypothesis: II. Mothers at risk for transitions and unskilled parenting. *Developmental Psychology*, 27, 489–504.

- Cavanagh, S. E., & Fomby, P. (2012). Family instability, school context, and the academic careers of adolescents. *Sociology of Education*, 85, 81–97.
- Cavanagh, S. E., & Huston, A. C. (2006). Family instability and children's early problem behavior. *Social Forces*, 85, 551–581.
- Cavanagh, S. E., & Huston, A. C. (2008). The timing of family instability and children's social development. *Journal of Marriage and Family*, 70, 1258–1270.
- Centers for Disease Control and Prevention and National Center for Health Statistics. (2016). *National marriage and divorce rate trends*. Retrieved from http://www.cdc.gov/nchs/nvss/marriage_divorce_tables.htm#modalIdString_CDC_Table_0
- Cherlin, A. (2009). *The marriage-go-round: The state of marriage and the family in America today*. New York, NY: Vintage.
- Claessens, A., Engel, M., & Curran, F. C. (2015). The effects of maternal depression on child outcomes during the first years of formal schooling. *Early Childhood Research Quarterly*, 32, 80–93.
- Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. *Psychological Bulletin*, 128, 746–773.
- Cooper, C. E., McLanahan, S. S., Meadows, S. O., & Brooks-Gunn, J. (2009). Family structure transitions and maternal parenting stress. *Journal of Marriage and Family*, 71, 558–574.

- Cooper, C. E., Osborne, C. A., Beck, A. N., & McLanahan, S. S. (2011). Partnership instability, school readiness, and gender disparities. *Sociology of Education*, 84, 246–259.
- Cox, A. D., Puckering, C., Pound, A., & Mills, M. (1987). The impact of maternal depression in young children. *Journal of Child Psychology and Psychiatry*, 28, 917–928.
- Cummings, M. E., Keller, P. S., & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: Exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry*, 46, 479–489.
- Deater-Deckard, K., & Dunn, J. (1999). Multiple risks and adjustment in young children growing up in different family settings: A British community study of stepparent, single mother, and nondivorced families. In E. M. Hetherington (Ed.), *Coping with divorce, single parenting and remarriage: A risk and resiliency perspective* (pp. 47–64). Mahwah, NJ: Erlbaum.
- deLusé, S. R., & Braver, S. L. (2015). A rigorous quasi-experimental design to evaluate the casual effect of a mandatory divorce education program. *Family Court Review: An Interdisciplinary Review*, 53, 66–78.
- Dilworth-Anderson, P., Burton, L. M., & Klein, D. M. (2005). Contemporary and emerging theories in studying families. *Sourcebook of Family Theory and Research*, 35–50.

- Elder, G. H., & Caspi, A. (1988). Economic stress in lives: Developmental perspectives. *Social Issues, 44*, 25–45.
- Elder, G. (1991). Family transitions, cycles, and social change. *Family Transitions, 31*–57.
- Elder Jr., G. H. (1994). Time, human agency, and social change: Perspective on the life course. *American Sociological Association, 57*, 4–15.
- Elder Jr., G. H. (1998). The life course as developmental theory. *Child Development, 69*, 1–12.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal, 8*, 430–457.
- Enders, C. K. (2001). Teacher's corner: A primer on maximum likelihood algorithms available for use with missing data. *Structural Equation Modeling: A Multidisciplinary Journal, 8*, 128–141. doi:10.1207/S15328007SEM0801
- Ertel, K. A., Rich-Edwards, J. W., & Koenen, K. C. (2011). Maternal depression in the United States: Nationally representative rates and risks. *Journal of Women's Health, 20*, 1609–1617.
- Eurostat. (2016). *Crude marriage rate*. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/images/b/b5/Crude_marriage_rate%2C_selected_years%2C_1960%E2%80%932014_%28per_1_000_inhabitants%29_YB16.png
- Fine, M. A. (1996). The clarity and content of the stepparent role. *Journal of Divorce and Remarriage, 24*, 19–34.

- Fine, M. A., Coleman, M., & Ganong, L. H. (1998). Consistency in perceptions of the step-parent role among step-parents, parents and stepchildren. *Journal of Social and Personal Relationships*, 15, 810–828.
- Fomby, P., & Bosick, S. J. (2013). Family instability and the transition to adulthood. *Journal of Marriage and Family*, 75, 1266–1287.
- Fomby, P., & Cherlin, A. J. (2007). Family instability and child well-being. *American Sociological Review*, 72, 181–204.
- Fomby, P., Mollborn, S., & Sennott, C. A. (2010). Race/ethnic differences in effects of family instability on adolescents' risk behavior. *Journal of Marriage and Family*, 72, 234–253.
- Fomby, P., & Osborne, C. (2017). Family instability, multipartner fertility, and behavior in middle childhood. *Journal of Marriage and Family*, 79, 75–93.
- Forehand, R., Long, N., Brody, G. H., & Fauber, R. (1986). Home predictors of young adolescents' school behavior and academic performance. *Child Development*, 57, 1528–1533.
- Forehand, R., Wierson, M., Thomas, A.M., Armistead, L., Kempton, T., & Neighbors, B. (1991). The role of family stressors and parent relationships on adolescent functioning. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 316–322.
- Frank, H. (2007). Young adults' relationship with parents and siblings: The role of marital status, conflict and post-divorce predictors. *Journal of Divorce & Remarriage*, 46, 105–124.

- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, 18, 233–239.
- Fröjd, S., Kaltiala-Heino, R., Pelkonen, M., von der Pahlen, B., & Marttunen, M. (2009). Significance of family life events in middle adolescence: A survey on Finnish community adolescents. *Nordic Journal of Psychiatry*, 63, 78–86.
- George, L. (1989). Stress, social support, and depression over the life course. In K. S. Markides & C. L. Cooper (Eds.), *Aging, Stress and Health* (p. 290). Chichester, UK: Wiley.
- George, L. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology*, 19, 353–373.
- Gigantesco, A., & Morosini, P. (2008). Development, reliability and factor analysis of a self-administered questionnaire which originates from the World Health Organization's Composite International Diagnostic Interview–Short Form (CIDI-SF) for assessing mental disorders. *Clinical Practice and Epidemiology in Mental Health*, 4, 1.
- Goodman, S. H., & Tully, E. (2006). Depression in women who are mothers: An integrative model of risk for the development of psychopathology in their sons and daughters. In C. L. M. Keyes & S. H. Goodman (Eds.), *Women and depression: A handbook for the social, behavioral, and biomedical sciences* (pp. 241–282). New York, NY: Cambridge University Press.

- Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical Child Family Psychology Review, 14*, 1–27.
- Harvey, J. H., & Fine, M. A. (2010). *Children of divorce: Stories of loss and growth*. New York, NY: Routledge.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*, 408–420.
- Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology, 67*, 451–470.
- Hernandez, D. C., & Ziol-Guest, K. M. (2009). Income volatility and family structure patterns: Association with stability and change in food stamp program participation. *Journal of Family Economic Issues, 30*, 357–371.
- Hetherington, E. M., Cox, M., & Cox, R. (1985). Long-term effects of divorce and remarriage on the adjustment of children. *Journal of the American Academy of Child Psychiatry, 24*, 518–530.
- Hetherington, E. M., & Kelly, J. (2002). Divorce reconsidered: For better or worse.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11*, 213–218.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1–55.

- Jensen, S. K., Dumontheil, I., & Barker, E. D. (2014). Developmental interrelations between early maternal depression, contextual risks, and interpersonal stress, and their effect on later child cognitive functioning. *Depression and Anxiety, 31*, 599–607.
- Jeynes, W. H. (1999). Effects of remarriage following divorce on academic achievement of children. *Journal of Youth and Adolescence, 28*, 385–393.
doi:10.1023/A:1021641112640
- Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review, 5*, 602–619.
- Judd, C. M., & Kenny, D. A. (2010). *Data analysis in social psychology: Recent and recurring issues*. Hoboken, NJ: John Wiley & Sons, Inc.
- Kenny, D. (2016, November 28). *Mediation*. Retrieved from <http://davidakenny.net/cm/mediate.htm>.
- Kessler, R. C., Andrews, G., Mroczek, D., Ustun, B., & Wittchen, H. (1998). The World Health Organization composite international diagnostic interview short-form (CIDI-SF). *International Journal of Methods in Psychiatric Research, 7*, 171–185.
- Kiernan, K. E., & Huerta, M. C. (2008). Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood. *The British Journal of Sociology, 59*, 783–806.

- Klein, D. N., Durbin, C. E., & Shankman, S. A. (2009). Personality and mood disorders. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (2nd ed., pp. 93–112). New York, NY: Guilford.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: The Guilford Press.
- Kurdek, L. A., Fine, M. A., & Sinclair, R. J. (1995). School adjustment in sixth graders: Parenting transitions, family climate, and peer norm effects. *Child Development*, 66, 430–445.
- Lagenkamp, A. G., & Frisco, M. L. (2008). Family transitions and adolescent severe emotional distress: The salience of family context. *Social Problems*, 55, 238–253.
- Lansford, J. E. (2009). Parental divorce and children's adjustment. *Perspectives on Psychological Science*, 4, 140–152.
- Lansford, J. E., Malone, P. S., Castelinno, D. R., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2006). Trajectories of internalizing, externalizing, and grades for children who have and have not experienced their parents' divorce or separation. *Journal of Family Psychology*, 20, 292–301.
- Lee, D., & McLanahan, S. (2015). Family structure transitions and child development: Instability, selection, and population heterogeneity. *American Sociological Review*, 80, 738–763.
- Little, R. J., & Rubin, D. B. (2014). *Statistical analysis with missing data*. John Wiley & Sons.

- MacCallum, R. C., & Austin, J. T. (2000). Application of structural equation modeling in psychological research. *Annual Review Psychology*, 51, 201–226.
- Macho, S., & Ledermann, T. (2011). Estimating, testing, and comparing specific effects in structural equation models: The phantom model approach. *Psychological Methods*, 16, 34–43.
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York, NY: Routledge.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 1–24.
- Magnuson, K., & Berger, L. M. (2009). Family structure states and transitions: Associations with children's wellbeing during middle childhood. *Journal of Marriage and Family*, 71, 575–591.
- Malone, P. S., Lansford, J. E., Castellino, D. R., Berlin, L. J., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Divorce and child behavior problems: Applying latent change score models to life event data. *Structural Equation Modeling: A Multidisciplinary Journal*, 11, 401–423.
- Martinez, C. R., & Forgatch, M.S. (2002). Adjusting to change: Linking family structure transitions with parenting and boys' adjustment. *Journal of Family Psychology*, 16, 107–117.
- McLanahan, S. (2009). Fragile families and the reproduction of poverty. *The Annals of the American Academy of Political and Social Science*, 621, 111–131.

- McLanahan, S. (2011). Family instability and complexity after a nonmarital birth: Outcomes for children in Fragile Families. In M. J. Carlson and P. England (Eds.), *Social class and changing families in an unequal America* (pp. 108–133). Stanford, CA: Stanford University Press.
- McLanahan, S., Garfinkel, I., Reichman, N., Teitler, J., Carlson, M., & Audigier, C. N. (2003). *The Fragile Families and Child Wellbeing Study: Baseline National Report*. Retrieved from <http://www.fragilefamilies.princeton.edu/sites/fragilefamilies/files/nationalreport.pdf>
- Molina, K. M., Alegria, M., & Mahalingam, R. (2013). A multiple-group path analysis of the role of everyday discrimination on self-rated physical health among Latina/os in the USA. *Annals of Behavioral Medicine*, 45, 33–44.
- Murray, L., Halligan, S. L., Adams, G., Patterson, P., Goodyear, I. M. (2006). Socioemotional development in adolescents at risk for depression: The role of maternal depression and attachment style. *Development and Psychopathology*, 18, 489–516.
- Muthén, B. O., Muthén, L. K., & Asparouhov, T. (2016). *Regression and mediation analysis using Mplus*. Los Angeles, CA: Muthén & Muthén.
- O’Conner, T. G., Hawkins, N., Dunn, J., Thorpe, K., & Golding, J. (1998). Family type and depression in pregnancy: Factors mediating risk in a community sample. *Journal of Marriage and Family*, 60, 757–770.
- Osborne, C., Berger, L. M., & Magnuson, K. (2012). Family structure transitions and changes in maternal resources and well-being. *Demography*, 49, 23–47.

- Osborne, C., & McLanahan, S. (2007). Partnership instability and child well-being. *Journal of Marriage and Family*, 69, 1065–1083.
- Pollet, S. L., & Lombreglia, M. (2008). A nationwide survey of mandatory parent education. *Family Court Review: An Independent Journal*, 46, 375–394.
- Potter, D. (2010). Psychosocial well-being and the relationship between divorce and children's academic achievement. *Journal of Marriage and Family*, 72, 933–946. doi:10.1111/j.1741-3737.2010.00740.x
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185–227.
- Pugh, K. L., & Farrell, A. D. (2012). The impact of maternal depressive symptoms on adolescents' aggression: Role of parenting and family mediators. *Journal of Child and Family Studies*, 21, 589–602.
- Quirk, M., Grimm, R., Furlong, M.J., Nylund-Gibson, K., & Swarmi, S. (2015). The association of Latino children's kindergarten school readiness profiles with grade 2-5 literacy achievement trajectories. *Journal of Educational Psychology*, 108, 814–829.
- Richardson, T., Stallard, P., & Velleman, S. (2010). Computerised cognitive behavioural therapy for the prevention and treatment of depression and anxiety in children and adolescents: A systematic review. *Clinical Child and Family Psychology Review*, 13, 275–290.

- Ruschena, E., Prior, M., Sanson, A., & Smart, D. (2005). A longitudinal study of adolescent adjustment following family transitions. *Journal of Child Psychology and Psychiatry, 46*, 353–363.
- Schoon, I., Jones, E., Cheng, H., & Maughan, B. (2012). Family hardship, family instability, and cognitive development. *Journal of Epidemiology and Community Health, 66*, 716–722.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Shapiro, D. (2014). Stepparents and parenting stress: The roles of gender, marital quality, and views about gender roles. *Family Process, 53*, 97–108.
- Smith, T. E. (1997). Differences between black and white students in the effect of parental separation on school grades. *Journal of Divorce and Remarriage, 27*, 25–42.
- Sohr-Preston, S. L., & Scaramella, L. V. (2006). Implications of timing of maternal depressive symptoms for early cognitive and language development. *Clinical Child and Family Psychology Review, 9*, 65–83.
- Speer, R. B., & Trees, A. R. (2007). The push and pull of stepfamily life: The contribution of stepchildren's autonomy and connection-seeking behaviors to role development in stepfamilies. *Communication Studies, 58*, 377–394.
- Steele, C. M. (2010). *Whistling Vivaldi*. New York, NY: W. W. Norton & Co.

- Stein, A., Malmberg, L. E., Sylva, K., Barnes, J., & Leach, P. (2008). The influence of maternal depression, caregiving, and socioeconomic status in the postnatal year on children's language development. *Child: Care, Health and Development*, 34, 603–612.
- Sun, Y., & Li, Y. (2009). Postdivorce family stability and changes in adolescents' academic performance: A growth-curve model. *Journal of Family Issues*, 30, 1527–1555.
- Taylor, A. C., & Bagdi, A. (2005). The lack of explicit theory in family research: A case analysis of the *Journal of Marriage and the Family*, 1990-1999. In V. L. Bengtson, A. C. Acock, K. R. Allen, P. Dilworth-Anderson, & D. M. Klein (Eds.), *Sourcebook of family theory and research* (pp. 22–25). Thousand Oaks, CA: Sage.
- Waldfoegel, J., Craigie, T., & Brooks-Gunn, J. (2010). Fragile families and child wellbeing. *Future Children*, 20, 87–112.
- Walker, A. J., Allen, K. R., & Connidis, I. A. (2005). Theorizing and studying sibling ties in adulthood. *Sourcebook of Family Theory and Research* (pp. 167–181). Thousand Oaks, CA: Sage.
- Wallerstein, J. S. (1991). The long-term effects of divorce on children: A review. *Journal of the American Academy of Child & Adolescent Psychiatry*, 30, 349–360.
- Wallerstein, R. S. (2000). *Forty-two lives in treatment: A study of psychoanalysis and psychotherapy*. New York, NY: The Analytic Press.

- Wallerstein, J. S., & Kelly, J. B. (1980). Effects of divorce on the visiting father-child relationship. *American Journal of Psychiatry*, 137, 1534–1539.
- Weaver, J. M., & Schofield, T. J. (2015). Mediation and moderation of divorce effects on children's behavior problems. *Journal of Family Psychology*, 29, 39–48.
- Williams, J., & MacKinnon, D. P. (2008). Resampling and distributions of the product methods for testing indirect effects in complex models. *Structural Equation Modeling: A Multidisciplinary Journal*, 1, 23–51.
- Wright, C. A., George, T. P., Burke, R., Gelfand, D. M., & Teti, D. M. (2000). Early maternal depression and children's adjustment to school. *Child Study Journal*, 30, 153–153.
- Zhao, X., Lynch, Jr., J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *The Journal of Consumer Research*, 37, 197–206.

APPENDIX A

TABLES

Table 1

Correlations, Means, and Standard Deviations

	<i>N</i>	Multiple family transitions (number)	Maternal depression	Maternal parenting stress	Children's externalizing behaviors	Children's internalizing behaviors	Children's verbal ability	Maternal education	Household Income (baseline)
Multiple family transitions (number)	4175	1.000							
Maternal depression	4138	0.066 <i>0.000</i>	1.000						
Maternal parenting stress	4048	0.027 <i>0.093</i>	0.188 <i>0.000</i>	1.000					
Children's externalizing behaviors	3337	0.077 <i>0.000</i>	0.125 <i>0.000</i>	0.144 <i>0.000</i>	1.000				
Children's internalizing behaviors	3337	0.004 <i>0.806</i>	0.149 <i>0.000</i>	0.165 <i>0.000</i>	0.6183 <i>0.000</i>	1.000			
Children's verbal ability	3346	-0.005 <i>0.754</i>	0.030 <i>0.055</i>	-0.028 <i>0.072</i>	-0.100 <i>0.000</i>	-0.066 <i>0.000</i>	1.000		
Maternal education (baseline)	4892	-0.168 <i>0.000</i>	-0.033 <i>0.034</i>	-0.094 <i>0.000</i>	-0.092 <i>0.000</i>	-0.063 <i>0.000</i>	0.099 <i>0.000</i>	1.000	
Household Income (baseline)	4897	-0.194 <i>0.000</i>	-0.066 <i>0.000</i>	-0.063 <i>0.000</i>	-0.110 <i>0.000</i>	-0.056 <i>0.001</i>	0.063 <i>0.000</i>	0.500 <i>0.000</i>	1.000
Mean		0.640	0.818	2.179	2.383	3.794	111.11	4.629	31987.51
Standard Deviations		0.922	1.886	0.682	3.575	4.173	20.376	1.822	31567.26

Note. Italicized numbers are *p* values. Household income and maternal education were assessed at baseline.

Table 2

Direct and Indirect Effects of Multiple Family Transitions

Effect (Path)	Unstandardized Parameters (SE)	95% CI	<i>p-value</i>	Standardized Parameters (SE)
<i>Direct effect path estimates</i>				
Multiple family transitions → Externalizing behaviors (a1)	.199 (.073)	-	0.008	.051 (.019)
Multiple family transitions → Internalizing behaviors (b1)	-.065 (.086)	-	0.452	-.014 (.019)
Multiple family transitions → Children's verbal ability (c1)	-1.165 (.349)	-	0.001	-.052 (.016)
Multiple family transitions → Maternal depression (m1)	.114 (.035)		0.001	.055 (.017)
Multiple family transitions → Maternal parenting Stress (m2)	.007 (.012)		0.562	.010 (.017)
Maternal depression → Children's externalizing behaviors (a2)	.171 (.039)		0.000	.090 (.022)
Maternal depression → Children's internalizing behaviors (b2)	.259 (.044)		0.000	.117 (.020)
Maternal depression → Children's verbal ability (c2)	.262 (.175)		0.134	.024 (.016)
Maternal parenting stress → Children's externalizing behaviors (a3)	.117 (.015)		0.000	.117 (.015)
Maternal parenting stress → Children's internalizing behaviors (b3)	.841 (.113)		0.000	.138 (.017)
Maternal parenting stress → Children's verbal ability (c3)	-1.386 (.493)		0.005	-.046 (.016)
<i>Control variable path estimates</i>				
Maternal depression → Maternal education	0.012 (.019)	-	0.534	.011 (.018)
Maternal depression → Household income	-.004 (.001)	-	0.000	-.061 (.017)
Maternal parenting stress → Maternal education	-.030 (.007)	-	0.000	-.081 (.017)
Maternal parenting stress → Household income	.000 (.000)	-	0.235	-.020 (.017)
Maternal education → Children's externalizing behaviors	-.079 (.034)	-	0.014	-.040 (.017)
Maternal income → Children's externalizing behaviors	-.008 (.002)	-	0.000	-.069 (.014)
Maternal education → Children's internalizing behaviors	-.080 (.047)	-	0.083	-.035 (.020)
Household income → Children's internalizing behaviors	-.004 (.002)	-	0.126	-.027 (.018)
Maternal education → Children's verbal ability	3.322 (.216)	-	0.000	.296 (.019)
Household income → Children's verbal ability	.117 (.012)	-	0.000	.180 (.018)

Table 2

Cont.

Effect (Path)	Unstandardized Parameters (SE)	95% CI	<i>p-value</i>	Standardized Parameters (SE)
<i>Indirect path estimates</i>				
<i>Children's externalizing behaviors</i>				
Multiple family transitions → Maternal depression (m1) → Children's externalizing behaviors	0.019	[.007 to .038]		
Total Indirect Effect	0.024	[.002 to .049]		
<i>Children's internalizing behaviors</i>				
Multiple family transitions → Maternal depression (m1) → Children's internalizing behaviors	0.029	[.011 to .054]		
Total indirect Effect	0.035	[.005 to .069]		

Note. Unstandardized estimates and confidence intervals were estimated using bias corrected bootstrapped confidence intervals. Standardized estimates and p values were estimated using maximum likelihood (MLR) standard errors. Both models were tested in Mplus.

Table 3

Family Structure Transitions Results

	Maternal Depressive Symptoms		Maternal Parenting Stress		Child Externalizing Behaviors		Child Internalizing Behaviors		Child Verbal Ability	
	UP	95% CI	UP	95% CI	UP	95% CI	UP	95% CI	UP	95% CI
Always Social Father Family (N=54)	0.16	[-.32 to .73]	0.18	[.01 to .36]	1.21	[-.19 to 3.69]	-0.22	[-1.57 to 1.97]	-3.89	[-9.83 to 2.06]
Always Single Mother Family (N=643)	0.29	[.11 to .46]	0.08	[.01 to .15]	0.50	[.11 to .92]	-0.12	[-.58 to .37]	-3.23	[-5.24 to -1.14]
Transition into Two-Parent Biological Family (N=220)	0.39	[.12 to .67]	-0.03	[-.12 to .07]	0.43	[-.15 to 1.37]	0.16	[-.49 to .99]	-2.89	[-5.58 to -.13]
Transition into Social Father Family (N=623)	0.24	[.06 to .43]	0.06	[-.01 to .13]	0.61	[.26 to .99]	-0.02	[-.48 to .44]	-3.73	[-5.70 to -1.68]
Transition into Single Mother Family (N=754)	0.49	[.31 to .67]	0.05	[-.02 to .12]	0.42	[.10 to .80]	-0.12	[-.54 to .30]	-1.88	[-3.76 to .15]
Maternal Depressive Symptoms					0.17	[.09 to .25]	0.26	[.17 to .35]	0.27	[-.07 to .61]
Maternal Parenting Stress					0.59	[.42 to .78]	0.85	[.63 to 1.07]	-1.29	[-2.26 to -.32]
Maternal Education	0.017	[-.02 to .05]	-0.029	[-.04 to -.02]	-0.072	[-.14 to -.01]	-0.078	[-.17 to .01]	3.27	[2.83 to 3.68]
Household Income	-0.003	[-.005 to .001]	0.001	[-.001 to .001]	-0.006	[-.01 to -.01]	-0.004	[-.001 to .001]	0.11	[.09 to .13]
Always Social Father Family - > Maternal Parenting Stress					0.11	[.01 to .23]	0.16	[.02 to .33]	-.24	[-.66 to -.03]
Always Single Mother Family -> Maternal Depressive Symptoms					0.05	[.02 to .09]	0.07	[.03 to .13]		
Always Single Mother Family -> Maternal Parenting Stress					0.05	[.01 to .10]	0.07	[.01 to .14]	-.12	[-.27 to -.02]

Table 3

Cont.

	Maternal Depressive Symptoms		Maternal Parenting Stress		Child Externalizing Behaviors		Child Internalizing Behaviors		Child Verbal Ability	
	UP	95% CI	UP	95% CI	UP	95% CI	UP	95% CI	UP	95% CI
Transition into Two-Parent Biological Family -> Maternal Depressive Symptoms					0.07	[.02 to .14]	0.10	[.03 to .20]		
Transition into Social Father Family -> Maternal Depressive Symptoms					0.04	[.01 to .09]	0.16	[.02 to .13]		
Transition into Single Mother Family -> Maternal Depressive Symptoms					0.08	[.04 to .14]	0.13	[.07 to .20]		

Note. UP=Unstandardized Parameters. The reference group is the Always Two-Parent Biological Family. Models were run in *Mplus* 7.31 with bias-corrected bootstrapped confidence intervals.

Table 4

Total Effects

Effect (Paths)	Unstandardized Parameters	95% CI
Multiple Family Transitions → Children's Externalizing Behaviors	0.22	[.09 to .38]
Multiple Family Transitions → Children's Internalizing Behaviors	-0.03	[-.20 to .15]
Multiple Family Transitions → Children's Verbal Ability	-1.15	[-1.80 to 1.44]
Always Social father family → Children's Externalizing Behaviors	1.35	[-.05 to 3.80]
Always Social father family → Children's Internalizing Behaviors	-0.02	[-1.35 to 2.15]
Always Social father family → Children's Verbal Ability	-4.09	[-10.03 to 1.78]
Always single mother family → Children's Externalizing Behaviors	0.59	[.21 to 1.02]
Always single mother family → Children's Internalizing Behaviors	0.03	[.44 to .51]
Always single mother family → Children's Verbal Ability	-3.26	[-5.25 to -1.20]
Transition into Two-Parent Biological family → Children's Externalizing Behaviors	0.48	[-.10 to 1.39]
Transition into Two-Parent Biological family → Children's Internalizing Behaviors	0.24	[-.41 to 1.08]
Transition into Two-Parent Biological family → Children's Verbal Ability	-2.75	[-5.45 to -.03]
Transition into Social father family → Children's Externalizing Behaviors	0.69	[.33 to 1.08]
Transition into Social father family → Children's Internalizing Behaviors	0.09	[-.38 to .55]
Transition into Social father family → Children's Verbal Ability	-3.745	[-5.72 to -1.70]
Transition into single mother family → Children's Externalizing Behaviors	0.52	[.20 to .91]
Transition into single mother family → Children's Internalizing Behaviors	0.04	[-.39 to .47]
Transition into single mother family → Children's Verbal Ability	-1.77	[-3.71 to .23]

Note. Unstandardized estimates and confidence intervals were estimated using bias corrected bootstrapped confidence intervals. Total effects includes maternal depressive symptoms and maternal parenting stress.

Table 5

Covariance Coverage

Multiple Family Transitions	Maternal Depressive Symptoms	Maternal Parenting Stress	Household Income	Maternal Education	Children's Externalizing Behaviors	Children's Internalizing Behaviors	Children's Verbal Ability	Always in Social Father Family	Always in Single Mother Family	Transition into Two-Parent Biological Family	Transition into Social Father Family	Transition into Single Mother Family
0.78	0.85	0.83	1.00	0.99	0.68	0.68	0.68	0.77	0.77	0.77	0.77	0.77

APPENDIX B

FIGURES

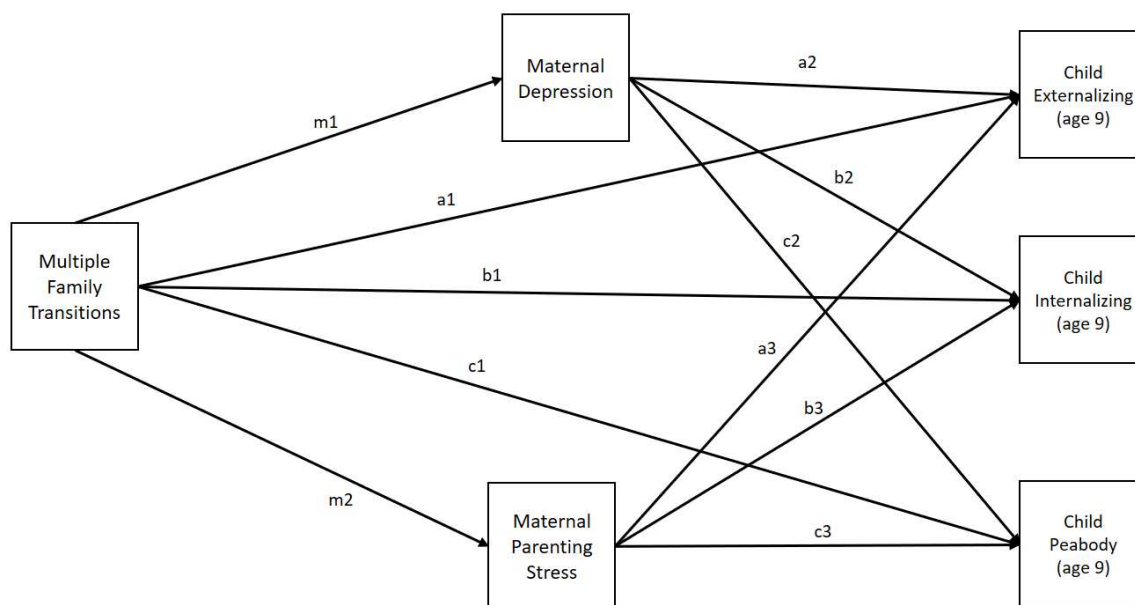


Figure 1. Multiple Family Transitions Conceptual Model. Three Saturated Models Were Tested Individually, One for Each Outcome. Household Income and Maternal Education Were Controlled for in Each Model, But Are Not Depicted in the Paths Above.

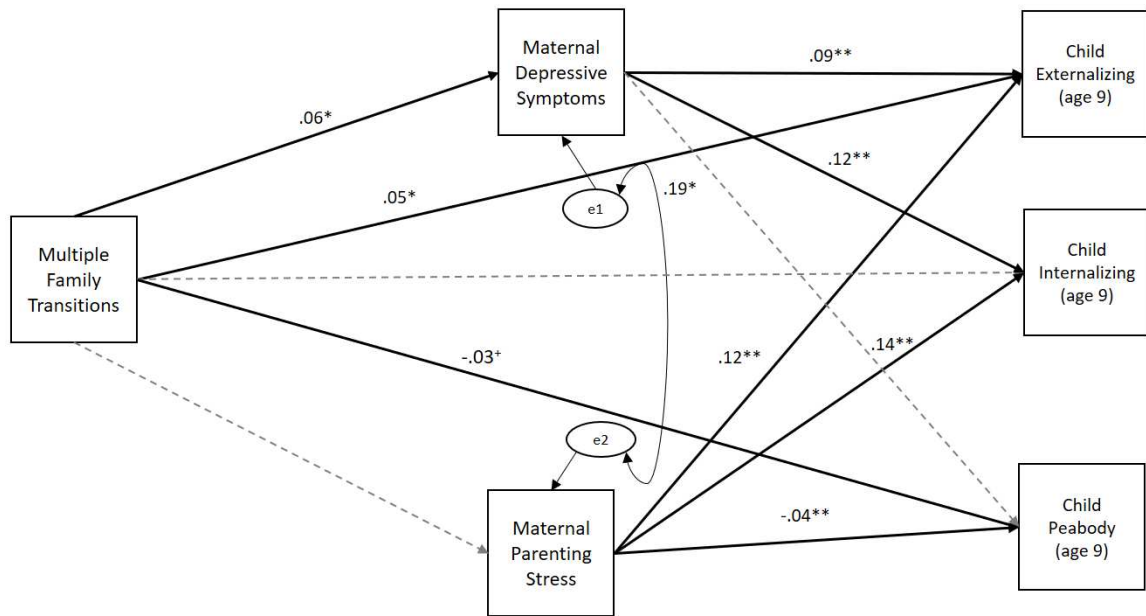


Figure 2. Multiple Family Transitions Path Model. Three Unsaturated Models Were Tested Individually, One for Each Outcome. Path Estimates Are Standardized. Significant Pathways Are Bolded, * Denotes $p < .05$, ** Denotes $p < .000$. Household Income and Maternal Education at Baseline Were Controlled for in Each Model, But Are Not Depicted in the Pathways Above.

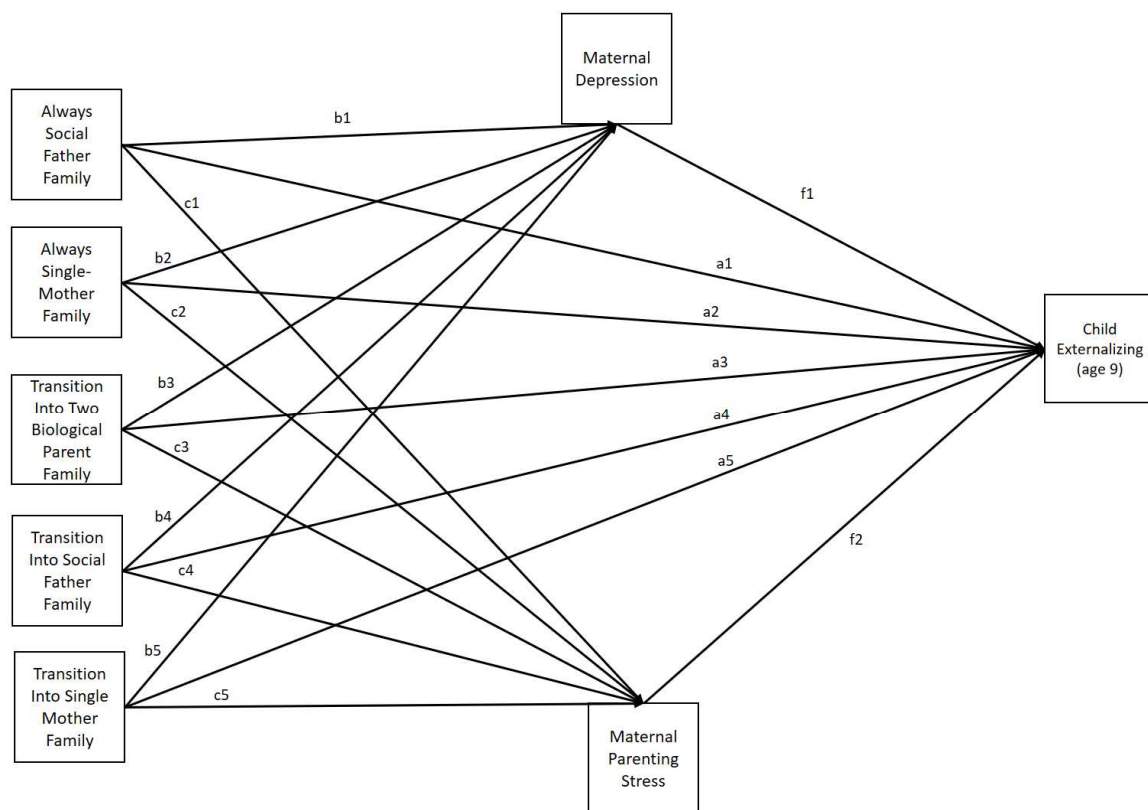


Figure 3a. Family Structure Transitions and Child Externalizing Behavior.

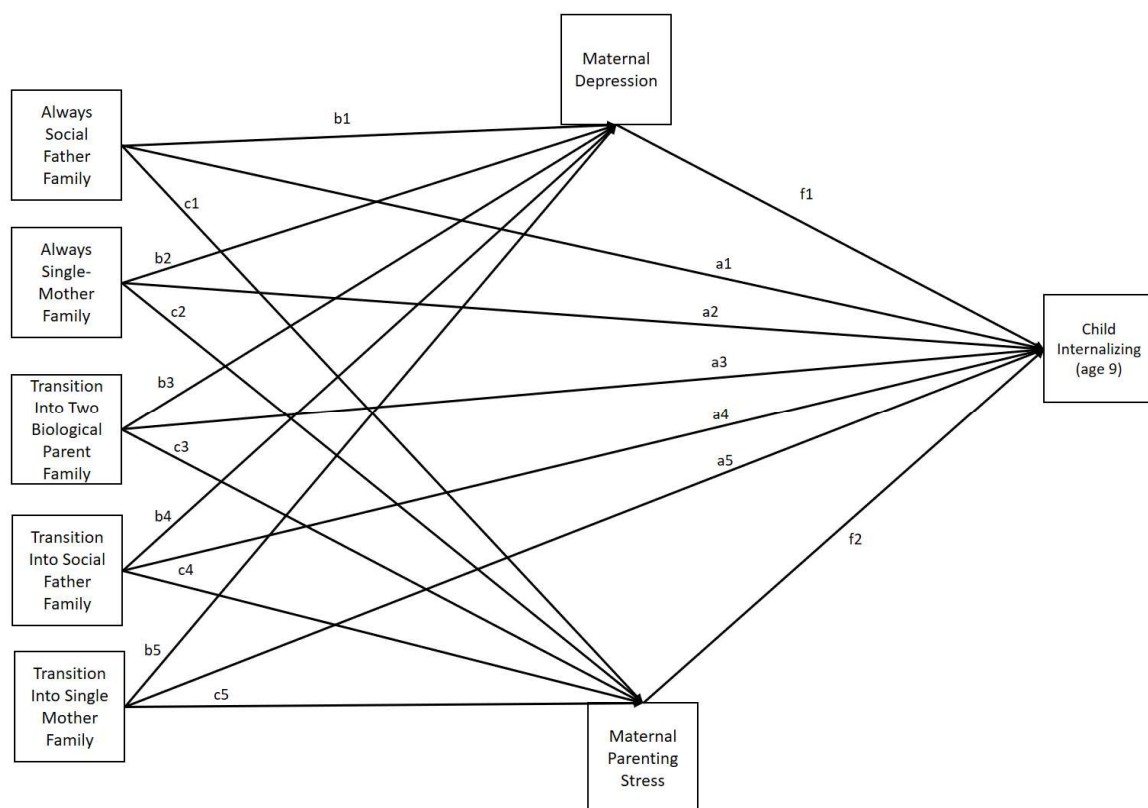


Figure 3b. Family Structure Transitions and Child Internalizing Behavior.

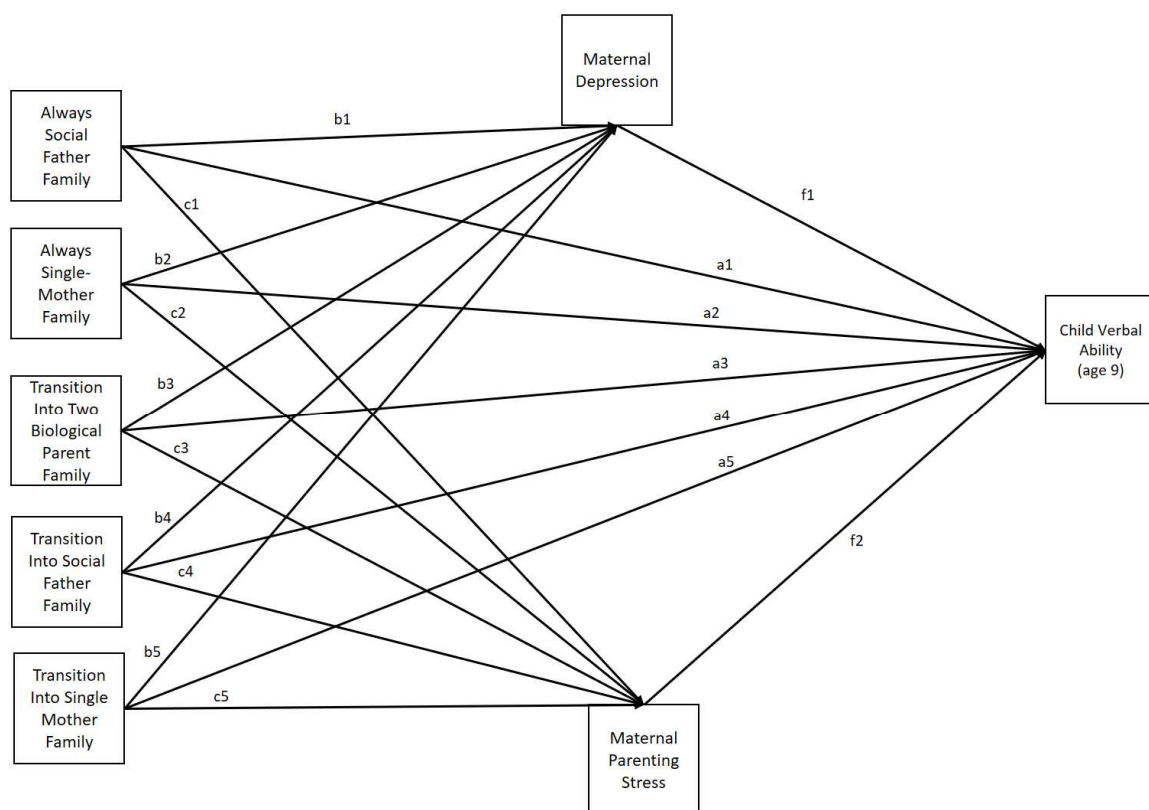


Figure 3c. Family Structure Transitions and Child Verbal Ability.

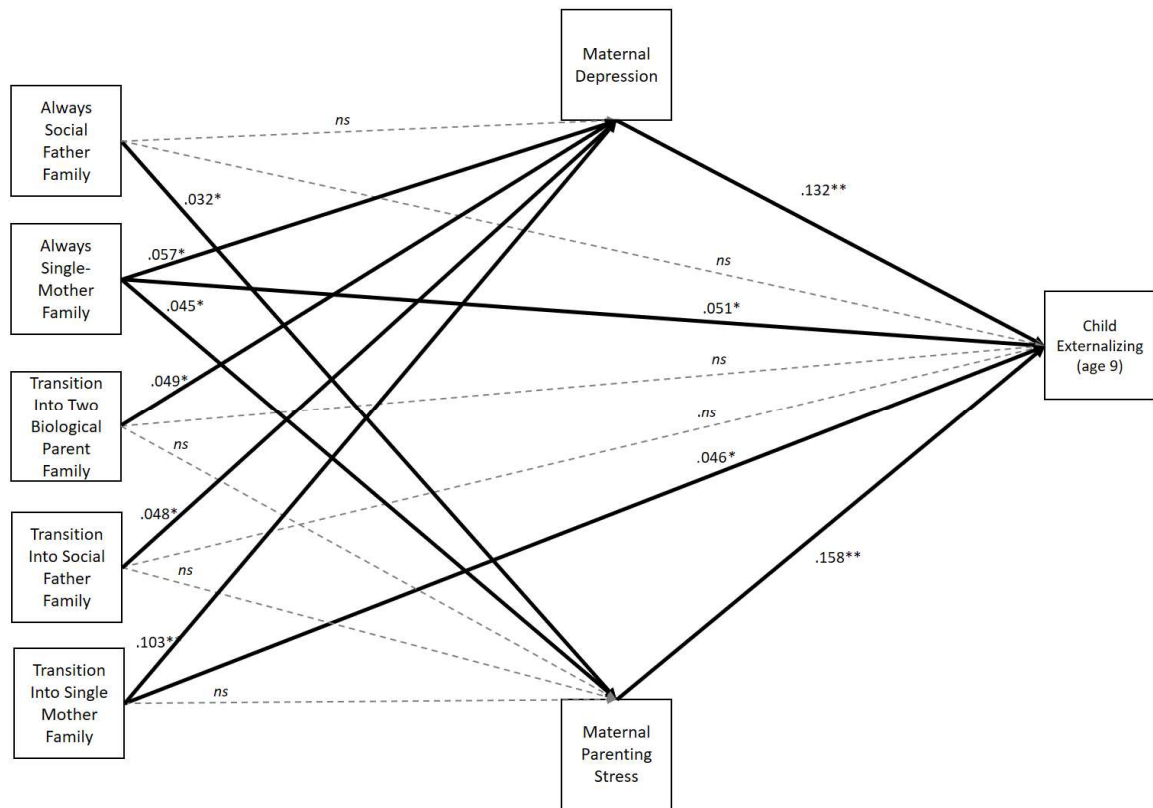


Figure 4a. Family Structure Transitions and Child Externalizing Behavior Results. Family Structure was Dummy Coded, the Reference Group was the “Always Two-Parent Biological Family.” Significant Paths are Bolded. * denotes $p < .05$, ** Denotes $p < .000$, ns = Not Significant. The model Was Tested in *Mplus* 7.31.

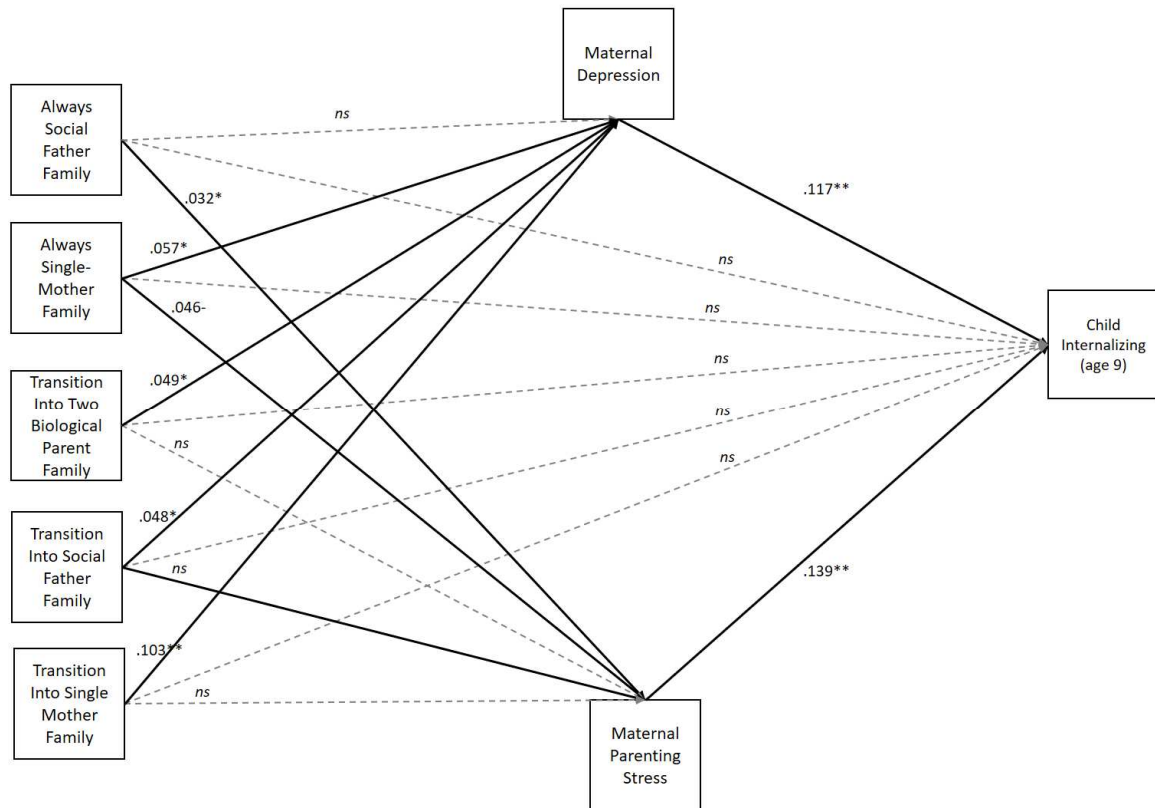


Figure 4b. Family Structure Transitions and Child Internalizing Behavior Results. Family Structure was Dummy Coded, the Reference Group was the “Always Two-Parent Biological Family.” Significant Paths are Bolded. * Denotes $p < .05$, ** Denotes $p < .000$, ns = Not Significant. The Model was Tested in *Mplus* 7.31.

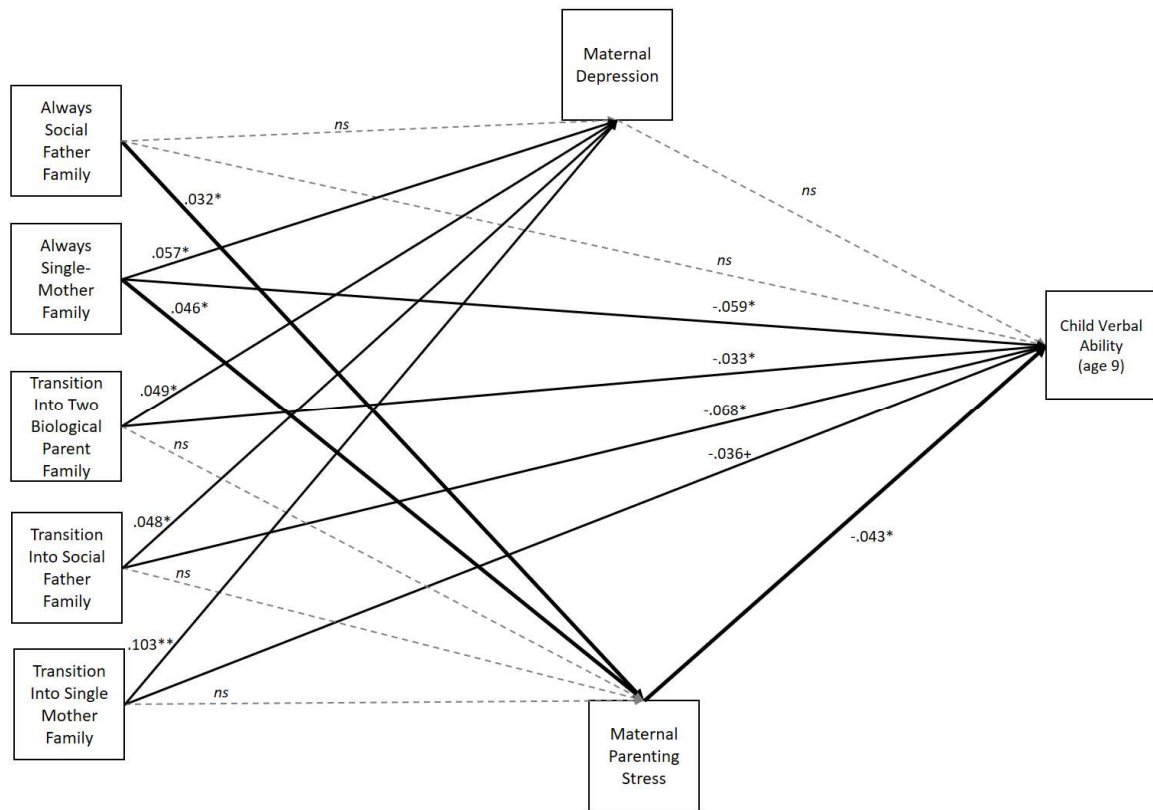


Figure 4c. Family Structure Transitions and Child Verbal Ability Results. Family Structure was Dummy Coded, the Reference Group was the “Always Two-Parent Biological Family.” Significant Paths are Bolded. * Denotes $p < .05$, ** Denotes $p < .000$, ns = Not Significant. The Model was Tested in *Mplus* 7.31.